

FIG. 1

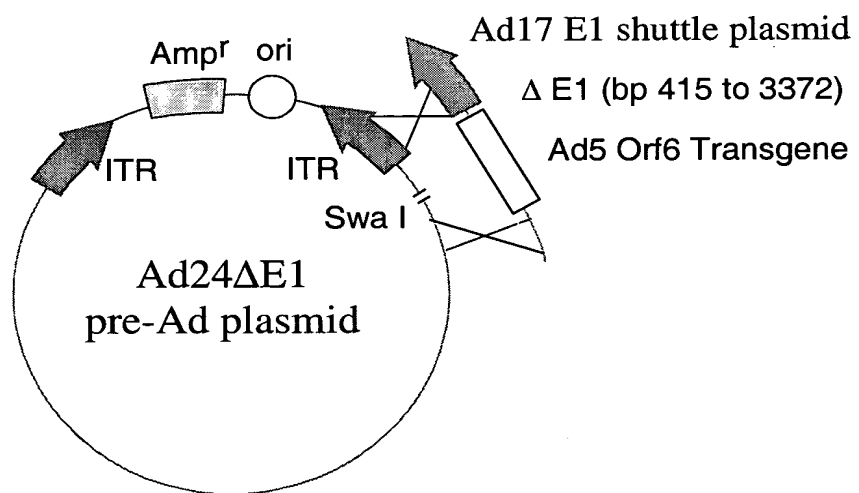


FIG. 2

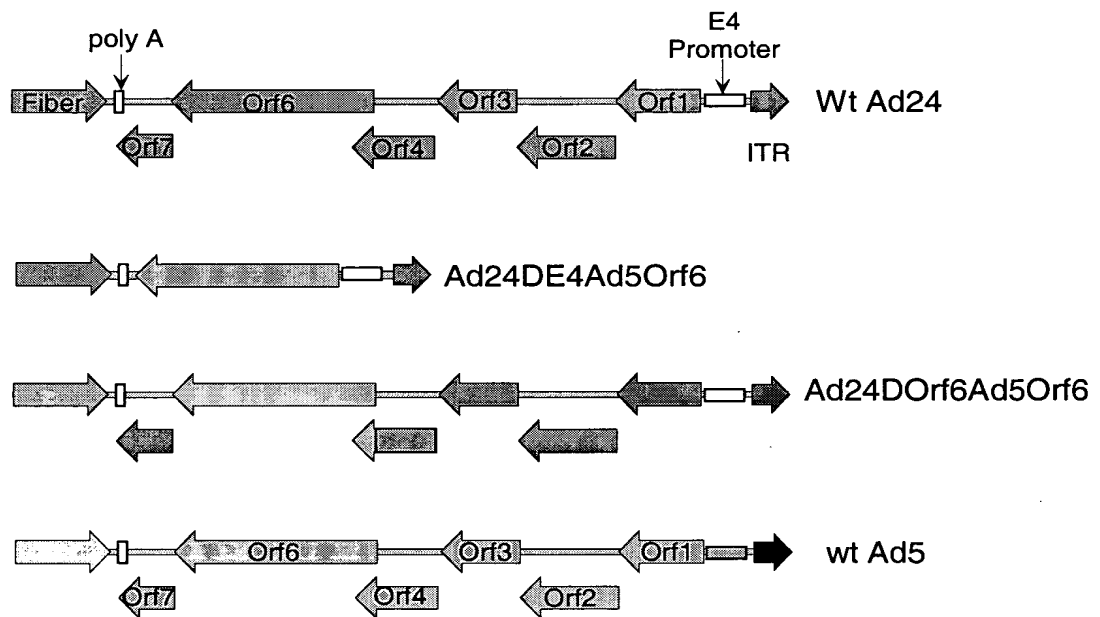


FIG. 3

### Growth Curve Comparison of Ad24 Based Vectors

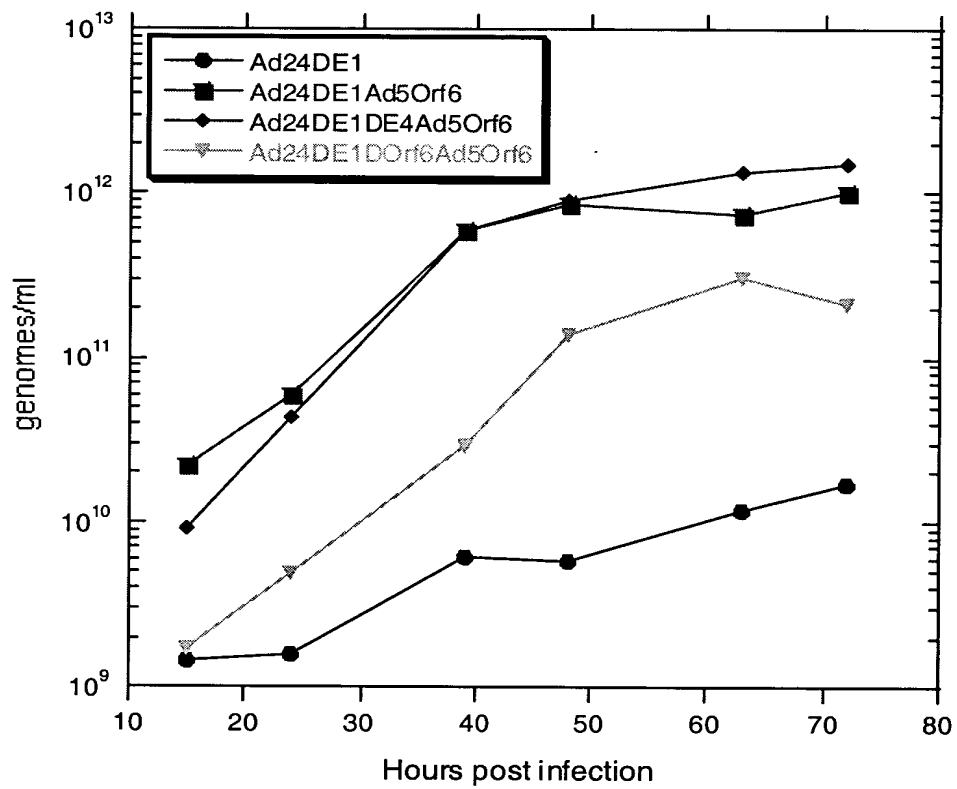


FIG. 4

1	catcatcaat	aatatacccc	acaaagtaaa	caaaagttaa	catgcaaagt	agctttttgaa
61	tttagggcgg	ggccagcgct	gattggacga	gagaagatga	tgcaaatgac	gtcacgacgc
121	acggctaacg	gtcgccgcgg	aggcggtggc	tagcccgga	gcaagtcg	gggctgatga
181	cgtataaaaa	agcggacttt	agaccgggaa	acggccgatt	ttcccgcg	cacgcccga
241	tatgaggtaa	ttctgggcgg	atgcaagtaa	aattaggtca	ttttggcg	aaaactgaat
301	gaggaagtga	aaagtgaaaa	ataccggtcc	cgcccagg	ggaatat	ccgagggc
361	agagactttg	accgattacg	tgggggtttc	gattgcggtg	ttttttcg	aatttccgcg
421	tccgtgtcaa	agtccggtgt	ttatgtcaca	gatcagctga	tccacaggg	atttaaacca
481	gtcgagcccg	tcaagaggcc	actcttgagt	gccagcgagt	agagatttct	ctgagctccg
541	ctcccagagt	ctgagaaaaa	tgagacacct	gcgcctcctt	tcttcaactg	tgccatttga
601	catggccgca	ttattgctgg	aggattatgt	gagtacaata	ttggaggacg	aactgcatcc
661	atctccattt	gagctgggac	ctacacttca	ggacctatat	gatttggagg	tagatgccca
721	tgatgacgac	ccgaacgaag	aggctgtgaa	tttaatat	ccagaatctc	tgattcttca
781	ggctgacata	gccagcgaag	ctgtacctac	accacttcat	acaccgactc	tgtcacccat
841	acctgaattg	gaagaggagg	acgagctaga	cctccgatgt	tatgaggaag	gttttccctc
901	cagcgattca	gaggacgaac	aggggtgagca	gagcatggct	ctaactctca	aatatgcttg
961	tgtggttggtg	gaagagcatt	ttgtgttgga	caatcctgag	gtgcccgggc	aaggctgtag
1021	atcctgccag	taccaccggg	ataagaccgg	agacacgaac	gcctcctg	ctctgtgtta
1081	catgaaaaag	aacttcagct	ttatttacag	taagtggagt	gaatgtgaga	gagactgagt
1141	gcttaacaca	taactgggta	atgcttaaac	agctgtgcta	agtgtggtt	atttttgtt
1201	ctaggtccgg	tgtagagga	tgagtcatca	ccctcagaag	aagaccaccc	gtgtccctc
1261	gagctgtcag	gcgaaacgcc	cctgcaagt	cacagacca	cccagtcag	accagtggc
1321	gagaggcgag	cagctgttga	aaaaattgag	gacttgttac	atgacatggg	tggggatgaa
1381	ccttttgacc	tgagcttgaa	acgccccagg	aactaggctc	agctgtgctt	agtcatgtgt
1441	aaataaagt	gtacaataaa	agtatatgtg	acgcatgcaa	ggtgtggtt	atgactatg
1501	ggcgtggctt	agtcctatat	aagtggcaac	acctgggcac	tggggcacag	accttcagg
1561	agttcctgat	ggatgtgtgg	actatccttg	cagactttag	caagacacgc	cggctttag
1621	aggatagttc	agacgggtgc	tccgggttct	ggagacactg	gtttggaact	cctctatctc
1681	gtctggtgta	cacagttaag	aaggattata	acgaggaatt	tgaaaatctt	tttgctgatt
1741	gctctggcct	gctagattct	ctaaatctcg	gccaccagtc	ccttttccag	gaaagggtag
1801	tccacagcct	tgatttttca	agcccaggc	gcactacagc	cggggttgct	tttggtgtt
1861	ttctggttga	caaattggagc	cagaacaccc	aactgagcag	gggctacatt	ctggacttcg
1921	cagccatgca	cctgtggagg	gcatgggtga	ggcagcgggg	acagagaatc	ttgaactact
1981	ggcttatata	gccagcagct	ccgggtcttc	ttcgtctaca	cagacaaaca	tccatgttgg
2041	aggaagaaat	gaggcaggcc	atggacgaga	acccgaggag	cggcctggac	cctccgtcgg
2101	aagaggagct	ggattgaatc	aggatatccag	cctgtaccca	gagcttagca	gggtgctgac
2161	atccatggcc	aggggaatga	aggggagag	gagcgatggg	ggcaataccg	ggatgtgac
2221	cgagctgacg	gccagcctga	tgaatcgcaa	gcgtccagag	cgcattacct	ggcacgagct
2281	acagatggag	tgtagggatg	aggtgggcct	gatgcaggat	aaatatggcc	tggagcagat
2341	aaaaaccac	tggttgaacc	cagatgagga	ttgggaggag	gccattaaga	aatatgccaa
2401	gatagccctg	cgcccagatt	gcaagtacag	ggtgaccaag	acggtgaata	tcagacatgc
2461	ctgctacatc	tcggggaacg	gggcagaggt	ggatcatcgat	accctggaca	aggccgcctt
2521	caggtgttgc	atgatgggaa	tgagagccgg	agtgatgaat	atgaattcca	tgattttcat
2581	gaacatgaag	ttcaatggag	agaagtttaa	tggggtgatg	ttcatggcca	acagtcacat
2641	gacctgtcac	ggctgcagtt	tcttcggctt	caacaatatg	tgcgagagg	tctggggcgc
2701	tgctaagatc	aggggatgta	agttttatgg	ctgctggatg	ggcgtggtcg	gaagacccaa
2761	gagcgagatg	tctgtgaagc	agtgtgtgtt	tgagaaatgc	tacctgggag	tctctaccga
2821	gggcaatgct	agagtgaac	attgtctctc	cctggagacg	ggctgcttct	gctgggtgaa
2881	gggcacagcc	tctctgaagc	ataatatggt	gaagggctgc	acggtatgag	gcatgtacaa
2941	catgctgaca	tgcgactcgg	gggtctgcca	tatcctgaag	aacatccatg	tgacctccca
3001	cccccggaag	aagtggccag	tgtttgagaa	taacctactg	atcaagtgcc	acatgcacct
3061	gggcgccaag	aggggcacct	tccagccgta	ccagtgcac	tttagccaga	ccaagctgct
3121	gctggagaac	gatgccttct	ccagggtgaa	cctgaacggc	atctttgaca	tggatgtctc
3181	ggtgtacaag	atcctgagat	acagatgagc	caagtccagg	gtgcgcgctt	gcgagtcg
3241	gggcagacac	accaggatgc	aaccagtggt	cctggatgtg	accgaggagc	tgaggccga
3301	ccacctggtg	atggcttgta	ccgggaccga	gttcagctcc	agtggggagg	acacagatta
3361	gaggtaggtt	gagtattagt	gggcgtggct	aaggtgacta	taaaggcggg	tgtcttacga
3421	gggtcttttt	gcttttctgc	agacatcatg	aacgggactg	gcggggcctt	cgaagggggg
3481	cttttttagcc	cttatttgac	aacccgcctg	ccgggatggg	ccggagtctc	tcagaatgtg
3541	atgggatcga	cggtggacgg	gctgccagtg	cttccagcaa	attcctcgac	ctgacatc
3601	gcgaccgtgg	ggaactcgtc	gctcgacagc	accgccgacg	ccgcggcagc	cgcagccgcc

FIG. 5A-1

3661	atgacagcga	cgagactggc	ttcagagctac	atgcccagca	gcagcagtag	cccctctgtg
3721	cccagttcca	tcacgcgccg	ggagaaactg	ctggccctgc	tggccgagct	ggaagccctg
3781	agccgccagc	tggccgccct	gaccagcag	gtgtccgagc	tccgcgaaca	gcagcagcag
3841	caaaataaat	gattcaataa	acacagattc	tgattcaaac	agcaaagcat	ctttattatt
3901	tatttttttcg	cgcgcggtag	gccctgggtcc	acctctccc	atcattgaga	gtgcggtgga
3961	ttttttccag	gacccggtag	aggtgggatt	ggatgttgag	gtacatgggc	atgagcccg
4021	cccgggggtg	gaggtagcac	cactgcatgg	cctcgtgctc	tggggctgtg	ttgtagatga
4081	tccagtcata	gcagggggcg	tgggcgtgg	gctggatgat	gtccttgagg	aggagactga
4141	tggccacggg	gagcccttg	gtgtaggtgt	tggcgaagcg	gttgagctgg	gagggatgca
4201	tgcgggggga	gatgatgtgg	agtttggcct	ggatcttgag	gttggcgatg	ttgccaccca
4261	gatcccgct	gggtttcatg	ttgtgcagga	ccaccagaac	ggtgtagccc	gtgcacttgg
4321	ggaacttgct	atgcaacttg	gaagggaatg	cgtgaaagaa	tttggagacg	cccttgtgcc
4381	caccaggtt	ttccatgcac	tcacccatga	tgatggcgat	gggcccgtgg	gctgcggctt
4441	tggcaaagac	gtttctgggg	tcagagacat	cgtaattatg	ctcctgggtg	agatcatcat
4501	aagaattttt	aatgaatttg	gggaggagg	tgccagattg	ggggacaatg	gttccctcgg
4561	gccccggggc	gaagtcccc	tcacatattt	gcattctcca	ggctttcatc	tcggaggggg
4621	ggatcatgtc	cacctgcggg	gcgatgaaaa	aaacggtttc	cggggcgggg	gtgatgagct
4681	gcgaggagag	caggtttctc	aacagctggg	acttgccgca	cccggctcgg	ccgtagatga
4741	ccccgatgac	gggttgacag	tggtagtcca	aggacatgca	gctgccgtcg	tcccggagga
4801	ggggggccac	ctcgttgagc	atgtctctga	cttggagggt	ttcccgagct	agctcgccga
4861	ggaggcggtc	cccggccagc	gagagcagct	cttgccaggga	agcaaagtgt	ttcaggggct
4921	tgagcccgtc	ggccatgggc	atcttggcga	gggtctgcga	gaggagtctg	aggcggtccc
4981	agagctcgtg	gacgtgctct	acggcatctc	gatccagcag	acttctcgt	ttcgggggtt
5041	gggacgactg	cgactgtagg	gcacgagacg	atgggcgtcc	agcgtgcca	gcgtcatgtc
5101	cttccaggg	ctcagtgtcc	gcgtgagcgt	ggtctccgtc	acggtgaagg	ggtgggcccc
5161	gggctgtgcg	cttgcaagg	tgcgcttgag	actcatctcg	ctgggtgctga	aacggggcac
5221	gtcttcgccc	tgcgcgtcgg	cgagatagca	gttgaccatg	agctcgtagt	tgagggcctc
5281	ggcggcgtgg	cccttggcgc	ggagcttgcc	cttgggaagag	cgcccgagg	cgggacagag
5341	gagggattgc	agggcgtaga	gcttgggtgc	gagaaagacg	gactcggggg	cgaagcatc
5401	cgctccgcag	tgggcgcaga	cggtctcgca	ctcgaccagc	caggtgagct	cgggtgtctc
5461	ggggtcaaaa	accagttttc	ccccgttctt	tttgatgcgc	ttcttacctc	gcgtctccat
5521	gagctctgtg	cgcgcgtcgg	tgacaaacag	gctgtctgtg	tccccgtaga	cggacttgat
5581	gggcctgtcc	tgcaggggcg	tcccgcggtc	ctcctcgtag	agaaactcgg	accactctga
5641	gacgaaggcg	cgcgtccacg	ccaagacaaa	ggaggccacg	tgcgaggggt	agcggctcgt
5701	gtccaccagg	gggtccacct	tttccacggt	atgcagacac	atgtccccct	cctccgcac
5761	caagaagggtg	attggcttgt	aggtgtaggc	cacgtgacct	ggggtccccg	acgggggggt
5821	ataaaagggg	gcgggtcgtg	gctcgtctc	actctcttcc	gcgtcgtcgt	acgcgagcgc
5881	cagctgttgg	ggtaggtatt	ccctttcgag	agcgggcatg	acctcggcac	tcaggttgtc
5941	agttttctaga	aacgaggagg	atttgatgtt	ggcttgccct	gccgcaatgc	tttttaggag
6001	actttcatcc	atctggtcag	aaaagactat	ttttttattg	tcaagcttgg	tggcgaagga
6061	gccatagagg	gcgttgagga	gaagcttggc	gatggatctc	atggtctgat	ttttgtcacg
6121	gtcggctcgc	tccttggccg	cgatgttgag	ctggacatac	tcgcgcgcga	cgcacttcca
6181	ttcggggaag	acgggtggtg	gctcgtcggg	cacgatcctg	acgcgccagc	cgcggttatg
6241	cagggtgacc	agatccacgc	tggtggccac	ctcgccgcgc	aggggctcgt	tggtccagca
6301	gaggcgtccg	cccttgcgcg	agcagaacgg	gggcagcaca	tcaagcagat	gctcgtcagg
6361	ggggtccgca	tcgatgggtga	agatgcccg	acagagttcc	ttgtcaaaat	aatcgatttt
6421	tgaggatgca	tcacccaagg	ccatctgcca	ctcgccggcg	gccagcgctc	gctcgtaggg
6481	gttgaggggc	ggaccccagg	gcattgggatg	cgtcagggcg	gaggcgtaga	tgccgcagat
6541	gtcgtagaca	tagatgggct	ccgagaggat	gccgatgtag	gtgggataac	agcgcctccc
6601	gcggatgctg	gcgcgcacgt	agtcatacaa	ctcgtgcgag	ggggccaaga	aggcgggggc
6661	gagattgggtg	cgctggggct	gctcggcgcg	gaagacgatc	tggcgaaaga	tggcatgcga
6721	gttggaggag	atggtggggc	gttgggaagat	gttaaagtgg	gcatgaggga	gacgaaccga
6781	gtcgcggatg	aagtgcgcgt	aggagtcttg	cagcttggcg	acgagctcgg	cgggtgacgag
6841	gacgtccatg	gcgcagtagt	ccagcgtttc	gcggatgatg	tcataaccgg	ctctccttt
6901	cttctcccat	agctcgcggt	tgaggcgcta	ctcctcgtca	tccttccagt	actcccgagg
6961	cgggaatcct	cgatcgtccg	cacggtaaga	gcccagcatg	tagaaatggt	tcacggcctt
7021	gtagggacag	cagcccttct	ccacggggag	ggcgtaagct	tgagcggcct	tgccgagcga
7081	ggtgtgcgtc	agggcgaagg	tatccctgac	catgactttc	aagaactggt	acttgaaatc
7141	cgagtgcgtc	cagccgcggt	gtccccagag	ctcgaaatcg	gtgcgcttct	tcgagagggg
7201	gttaggcaga	gcgaaagtga	cgtcattgaa	gagaatcttg	cctgcccgcg	ctcgaaat
7261	gcgggtgatg	cggaaagggc	ccgggacgga	ggctcgggtg	ttgatgacct	gggcccagag

FIG. 5A-2

7321	gacgatctcg	tcgaagccgt	tgatgtttgtg	cccgcacgatg	tagagtcca	tgaatcgcgg
7381	gcggccttta	atgtgcggca	gcttttttag	ctcctcgtag	gtgaggtcct	cggggcaatg
7441	cagtcctgtg	tgctcgagcg	cccactcctg	gagatgtggg	ttggcttgca	tgaatgaagc
7501	ccagagctcg	cgggccataa	gggtctggag	ctcgtcgcga	aagaggcgga	actgctggcc
7561	cacggccatc	ttttctgggg	tgacgcagta	gaaagtaagg	gggtcccgt	cccagcgatc
7621	ccagcgtaag	cgcacggcta	gatcgcgagc	gagggcgacc	agctctgggt	cccccgagaa
7681	tttcataacc	agcataaagg	ggacgagctg	cttgccgaag	gaccccatcc	aggtgtaggt
7741	ttctacatcg	taggtgacaa	agagccgctc	cgtgcgagga	tgagagccga	ttgggaagaa
7801	ctggatttcc	tgccaccagt	tggacgagtg	gctgttgatg	tgatgaaagt	agaaatcccg
7861	ccggcgaacc	gagcactcgt	gctgatgctt	gtaaaagcgt	ccgcagtact	cgcagcgctg
7921	cacgggctgt	acctcatcca	cgagatacac	agcgcgtccc	ttgaggagga	acttcaggag
7981	tggcggccct	ggctgggtgt	tttcatgttc	gcctgcgtgg	gactcaccct	ggggctcctc
8041	gaggacggag	aggctgacga	gcccgcgcgg	gagccaggtc	catagtctcg	cgcggcgggg
8101	gcggagagcg	aagacgaggg	cgcgcagttg	ggagctgtcc	atggtgtcgc	ggagatccag
8161	gtccgggggc	agggttctga	ggttgacctc	gtagaggcgg	gtgaggcgct	gcttgagatg
8221	cagatggtac	ttgatctcca	cgggtgagtt	ggtggctgtg	tccacgcatt	gcatgagccc
8281	gtagctgctc	ggggccacga	ccgtgcccgc	gtgcgctttt	agaagcgggt	tcgcgacgc
8341	gctcccggcg	gcagcggcgg	ttccggcccc	gcgggcaggg	gcggcagagg	cacgtcggcg
8401	tggcgctcgg	gcaggtcccg	gtgctgcgcg	ctgagagcgc	tggcgtgcgc	gacgacgcgg
8461	cgggttgacat	cctggatctg	ccgcctctgc	gtgaagacca	ccggccccgt	gactttgaac
8521	ctgaaagaca	gttcaacaga	atcaatctcg	gcgtcattga	cggcggcctg	acgcaggatc
8581	tcttgacagt	cgcccagatt	gtcctggtag	gcgatctcgg	acatgaactg	ctcgatctcc
8641	tcctcctgga	gatcgcgcgc	gcccgcgcgc	tccacggtgg	cggcagaggt	attggagatg
8701	cgacccatga	gctgcgagaa	ggcgcccagg	ccgctctcat	tccagacgcg	gctgtagacc
8761	acgtccccgt	cggcgctcgc	cgcgcgcagt	accacctgcg	cgaggttgag	ctccacgtgc
8821	cgcgtgaaga	cggcgtagtt	cgcgagcgcg	tggaaagaggt	agtttagggt	ggtggcgatg
8881	tgctcgggtg	cgaagaagta	catgatccag	cggcgcaggg	gcctctcgct	gatgtcgccg
8941	atggcctcca	gcctttccat	ggcctcgtag	aaatccacag	cgaagttgaa	aaactgggcg
9001	ttgcggggccg	agaccgtgag	ctcgtcctcc	aggagcctga	tgagttcggc	gatggtggcg
9061	cgcacctcgc	gctcgaaatc	cccggggggc	tcctcctctt	cctctctctt	catgacgacc
9121	tcttcttcta	tttcttcttc	tggggcggtg	gtgggtggcg	gggcccgcag	acgacggcga
9181	cgcaccggga	gacggtcgac	gaagcgctcg	atcatctccc	cgcggcgggc	acgcatgggt
9241	tcggtgacgg	cgcgaccccc	ttcgcgagga	cgcagcgtga	agacgccgcc	ggtcatctcc
9301	cggtaatggg	gcgggtcccc	gttgggcagc	gagagggcgc	tgacgatgca	tcttatcaat
9361	tgcggtgtag	gggacgtgag	cgcgtcgaga	tcgaccggat	cggagaatct	ttcgaggaaa
9421	gcgtctagcc	aatcgagtc	gcaaggtaag	ctcaaacacg	tagcagccct	gtggacgctg
9481	ttagaattgc	ggttgctgat	gatgtaattg	aagtaggcgt	ttttaaggcg	ggtgatgggt
9541	gcgaggagga	ccaggtcctt	gggtcccgt	tgctggatgc	gaagccgctc	ggccatgccc
9601	caggcctggc	cctgacaccg	gctcaggttc	ttgtagtagt	catgcatgag	cctctcaatg
9661	tcatcactgg	cggaggcgga	gtcttccatg	cgggtgaccc	cgacgcccct	gagcggctgc
9721	acgagcgcca	ggtcggcgac	gacgcgctcg	gcgaggatgg	cctgttgcac	gcgggtgagg
9781	gtgtcctgga	agtcgtccat	gtcgacgaag	cgggtgtagg	ccccggtggt	gatggtgtag
9841	gtgcagttgg	ccatgagcga	ccagttgacg	gtctgcaggc	cgggttgcat	gacctctgag
9901	tacctgagcc	gcgagaaggc	gcgcgagtcg	aagacatagt	cgttgccagg	gcgcacgagg
9961	tactggtatc	caactaggaa	gtgcggcggc	ggctggcggt	agagcggcca	gcgctgggtg
10021	gccggcgcg	ccggggccag	gtcctcgagc	atgaggcggt	ggtagccgta	gaggtagcgg
10081	gacatccagg	tgatgccggc	ggcggtgggt	gaggcgcgcg	ggaactcgcg	gacgcggttc
10141	tcagatgttg	gcagcggcag	gaaatagtc	atggtcggca	cgttctggcc	ggtgagacgc
10201	gcgcagtcct	tgacgctcta	gaggcaaaaa	cgaaagcggt	tgagcgggct	cttctcctcg
10261	agcctggcgg	aacgcaaacg	ggttaggccg	cgtgtgtacc	ccggttcgag	tccccctcgaa
10321	tcaggctgga	gccgcgacta	acgtgggtatt	ggcactcccc	tctcgacccg	agcccgatag
10381	ccgccaggat	acggcggaga	gccctttttt	ccgaccgagg	ggagtcgcta	gacttgaaag
10441	cggccgaaaa	ccccgcgggg	tagtggctcg	cgcccgtagt	ctggagaagc	tttgccaggg
10501	ttgagtcgcg	gcagaaccgc	gttcgcggac	ggccgcggcg	agcgggactt	gttcacccc
10561	ccgatttaaa	gacccacagc	cagccgactt	ctccagttac	gggagcgagc	cccccttttt
10621	cttttttgcca	gatgcatccc	gtcctgcgcc	aaatgcgtcc	cacccccctt	ccggcgacca
10681	ccgcgaccgc	ggccgtagca	ggcgccggcg	ctgtagcccc	gccacagcag	acagagatgg
10741	acttggaaga	gggcgaaggg	ctggcgagac	tgggggcgcc	gtccccggag	cgacaccccc
10801	gcgtgcagct	gcagaaggac	gtgcgcccgc	cgtacgtgcc	tgccgagaac	ctgttcaggg
10861	accgagcgg	ggaggagccc	gaggagatgc	gcgactggcg	ttttcggggc	ggcagggagc
10921	tgcgcgaggg	cctggaccgc	cagcgcgtgc	tgcgcgacga	ggatttcgag	ccgaacgagc

FIG. 5A-3

10981	agacgggggat	cagccccgcg	cgcgcgacag	tggcgggcg	caacctgggtg	acggcctacg
11041	agcagacggt	gaagcaggag	cgcaacttcc	aaaagagttt	caacaacccat	gtgcgcacgc
11101	taatcgcgcg	cgaggaggtg	gccctgggct	tgatgcacct	gtgggacctg	gcggaggcca
11161	tcgtgcagaa	cccggacagc	aagcctctga	cggcgcagct	gttccctgggtg	gtgcagcaca
11221	gcagggacaa	cgaggcggtc	agggaggcgc	tgctaaacat	cgccgagccc	gagggccgct
11281	ggctgctgga	gctgatcaac	atcttgca	gcacgtagt	gcaggagcgc	agcctgagcc
11341	tggccgagaa	ggtggcggt	atcaactact	cggtgctgag	cctgggcaag	ttttacgcgc
11401	gcaagattta	caagacgccg	tacgtgcca	tagacaagga	ggtgaagata	gacagctttt
11461	acatgcgcat	ggcgctcaag	gtgctgacgc	tgagcgacga	cctgggctg	taccgcaacg
11521	accgcatcca	caaggccgtg	agcgcgagcc	ggcgggcgga	gctgagcgac	cgcgagctga
11581	tgctgagtct	gcgcccggcg	ctggtagggg	gcgcccggcg	cggtgaggag	tcctacttcg
11641	acatgggggg	ggacctgcat	tggcagccga	gccggcgcg	cctggaggcc	gcctacgggtc
11701	cagaggactt	ggatgaggat	gaggaagagg	aggaggatgc	acccgctgcg	gggtactgac
11761	gcctccgtga	tgtgttttta	gatgcagcaa	gccccggacc	ccgccataag	ggcgctgctg
11821	caaagccagc	cgtccgggtc	agcatcgga	gactgggagg	ccgcatgca	acgcatcatg
11881	gccctgacga	cccgcacccc	cgagtccttt	agacaacagc	cgaggcccaa	cagactctcg
11941	gccattctgg	aggcgggtgt	cccctctcgg	accaacccca	cgacagagaa	ggtgctggcg
12001	atcgtgaacg	cgctggcgga	gaacaaggcc	atccgtccc	acgaggcccg	gctggtgtac
12061	aacgccctgc	tggagcgcg	gggcccgtac	aacagcaca	acgtgcagtc	caacctggac
12121	cggctggtga	cgagcgtgcg	cgaggccgtg	gcgcagcgcg	agcgggtcaa	gaacgagggc
12181	ctgggctcgt	tgggtggcgt	gaacgccttc	ctggcgacgc	agccggcgaa	cgtgccgcgc
12241	gggcaggacg	attacaccaa	ctttatcagc	gcgctgcggc	tgatggtgac	cgaggtgccc
12301	cagagcgagg	tgtaccagtc	gggcccagac	tactttttcc	agacgagccg	gcagggcctg
12361	cagacggtga	acctaagcca	ggctttcaag	aatctgcgcg	ggctgtgggg	cgtgcaggcg
12421	cccgtggggc	accggtcgac	ggtgagcagc	ttgctaacgc	ccaactcgcg	gctgctgctg
12481	ctgctgatcg	cgcccttcac	cgacagcggc	agcgtgaacc	gcaactcgta	cctggggccac
12541	ctgctgacgc	tttaccgcga	ggccataggc	caggcgacag	tggacgagca	gaccttcacg
12601	gagatcacta	gcgtgagccg	cgcgctgggt	cagaacgaca	ccgacagtct	gagagccacc
12661	ctgaacttct	tgctgacaaa	tagacagcag	aagattccgg	cgcagtagc	gctgtcggcc
12721	gaggaggagc	gcacccctgag	atatgtgcag	cagagcgtag	ggcttttcc	gatgcaggag
12781	ggggccaccc	ccagcgccgc	gctggacatg	acgcgcgca	acatggaacc	tagcatgtac
12841	gccgccaacc	ggccgttcac	caataagctg	atggactacc	tgcaccgcgc	ggctgccatg
12901	aactcggact	actttactaa	tgctatacta	aaccgcact	ggctcccgc	gccgggggtc
12961	tacacgggcg	agtacgacat	gcccgaaccc	aacgatgggt	tcctgtggga	cgacgtggac
13021	agcgcggtgt	tctccccgac	cttgcaaaa	cgccaggagg	cggtacgcac	gcccgcgagc
13081	gagggcgcg	tgggtcggag	cccctttcct	agcttaggga	gtttgcatag	cttgccgggc
13141	tcggtgaaca	gcggcagggt	gagccggccg	cgcttgctgg	gcgaggacga	gtacctgaac
13201	gactcgctgc	tgacgcgc	gcgggtcaag	aacgccatgg	ccaataacgg	gatagagagt
13261	ctggtggaca	aactgaaccg	ctggaagacc	tacgctcagg	accataggga	tgcgcccgcg
13321	ccgcgcgac	agcgccacga	ccggcagcgg	ggcctggtgt	gggacgacga	ggactcggcc
13381	gacgatagca	gcgtgttgga	cttggggcg	agcggtgggg	ccaacccgtt	cgcgcatctg
13441	cagcccagac	tggggcgacg	gatgttttga	atgaaataaa	actcaccaag	gcatcagcgt
13501	gcgttctctt	ccttggttaga	gatgagcg	cggtgggtgt	cttcctctcc	tcctccctcg
13561	tacgagagcg	tgatggcgca	ggcaaccctg	gaggttccgt	ttgtgcctcc	gcggtatatg
13621	gctcctacgg	agggcagaaa	cagcattcgt	tactcggaac	tggctccgca	gtacgacacc
13681	actcgctgt	acttggtgga	caacaagtcg	gcggacatcg	cttccttgaa	ctacaaaac
13741	gaccacagca	acttcctgac	cacggtggtg	cagaacaacg	atttcacccc	cgccgaggcc
13801	agcacgcaga	cgataaattt	tgacgagcgg	tcgcggtggg	gcggtgattt	gaagaccatt
13861	ctgcacacca	acatgcccaa	tgtgaaccg	tacatgttca	ccagcaagtt	taaggcgcg
13921	gtgatggtgg	ctaggaagg	ggtagatcag	aatgatagga	gcaaggatga	gttaaaatat
13981	gagtggtttg	agtttaccct	gcccgagggc	aacttttccg	agaccatgac	catagacctg
14041	atgaacaacg	ccatcttgga	aaactacttg	caagtggggc	ggcaaaatgg	cgtgctggag
14101	agcgatatcg	gagtcaggtt	tgacagcagc	aatttcaagc	tgggtgggga	cccggtaacc
14161	aagctggtga	tgccctgggt	ctacacccac	gaggcccttc	acccggacgt	tgtgctgctg
14221	ccgggtgcg	gggtggactt	caccgagagc	cgctgagca	acctcctggg	cattcgcaag
14281	aagcaacctt	tccaagagg	cttcaggatc	atgtatgagg	atctcgagg	tggtaacatc
14341	ccgcccctcc	tggatgtcaa	gcaatatttg	gatagtaaaa	agaagcttga	ggaggcaaca
14401	cagaatgcaa	ccagggtgc	tggagatatc	agaggagaca	gtcatattcc	aagagctgtg
14461	gaacaagcgg	ctgaaaagga	tctggtcatt	gtaccagtaa	cacaagatga	aagtaagaga
14521	agctataatg	tcatagatgg	caccatgac	accctctacc	gaagttggta	ctgtcctat
14581	acctacgggg	accccgagaa	gggggtgcag	tcgtggacgc	tgctcaccac	cccggacgtc

FIG. 5A-4



14641	acctgcgggcg	cggagcaagt	ctactgggtcg	ctgccgggacc	tcatgcaaga	ccccgtcacc
14701	ttccgctcta	cccagcaagt	cagcaactac	cccgtgggttg	gcgccgagct	catgcccttc
14761	cgcgcccaaga	gctttttacaa	cgacctcgcc	gtctactccc	agctcatccg	cagctacacc
14821	tccctcacc	acgtcttcaa	ccgcttcccc	gacaaccaga	tcctctgccc	tcgccccg
14881	cccaccatca	ccacggtcag	tgaaaacgtg	cctgctctca	cagatcacgg	gacgctaccg
14941	ctgcgagca	gtatccgagg	agtccagcga	gtgaccgtca	ctgacgcccc	tcgcccacc
15001	tgctccctacg	tctacaaggc	cctgggcata	gtcgcgccgc	gcgtgctttc	cagtcgcacc
15061	ttctaaaaaa	tgtctattct	catctcgccc	agcaataaca	ccggtggggg	tcttactagg
15121	cccagcacca	tgtacggagg	agccaagaag	cgctcccagc	agcaccctcg	ccgctccgc
15181	ggccacttcc	gcgtccctg	ggcgcttac	aagcgccggc	ggactttctac	cgccgcccgtg
15241	cgcaccaccg	tcgacgacgt	catcgactcg	gtggtcgccc	acgcgcgcaa	ctataccccc
15301	gccccctcca	ccgtggacgc	ggtcatcgac	agcgtgggtg	ccgacgcgcg	cgactatgcc
15361	agacgcaaga	gcccggcgcg	acggatcgcc	aggcgccacc	ggagtacgcc	gcccatgcgc
15421	gcccgcgggg	ctctgctgcg	cgcgccaga	cgcacggggc	gccgggccaat	gatgcgagcc
15481	gcgcgcgcgc	ccgccactgc	acccccgcga	ggcaggactc	gcagacgagc	ggccgcccgc
15541	gctgcgcgcg	ccattttctag	catgaccaga	cccaggcgcg	gaaacgtgta	ctgggtgcg
15601	gactccgtca	cgggcgtgcg	cgtgcccgtg	cgcaccctgc	ctcctcgctc	ctgatctaat
15661	gcttggtgtcc	tccccgcga	gcgacgatgt	caaagcgcaa	aatcaaggag	gagatgtccc
15721	aggctgctgc	cccggagatt	tacggaccac	cccaggcgga	ccgaaacccc	cgcaaaatca
15781	agcgggttaa	aaaaaaggat	gaggtggacg	agggggcagt	agagtttgtg	cgcgagttcg
15841	ctccgcggcg	gcgcgtaaat	tggaaagggc	gcaggggtgca	gcgcgtgttg	cggccccgca
15901	cggcggtggg	gtttacgccc	ggcgagcggg	cctcggtcag	gagcaagcgt	agctatgacg
15961	aggtgtacgg	cgacgacgac	atcctggacc	aggcgccgga	gcgggcgggc	gagttcgct
16021	acgggaagcg	gtcgcgcgaa	gaggagctga	tctcgttgcc	gctggacgag	agcaacccca
16081	cgccctagcct	gaagcccgtg	accctgcagc	aggtgctgcc	ccaagcagtg	ctgctgccga
16141	gcccgcgggg	caagcgcgag	ggcgagaata	tgtaccgcac	catgcagatc	atggtgcccc
16201	agcgccggcg	cgtggaagaa	gtgctggaca	ccgtgaaaat	ggatgtggag	cccagaggtca
16261	aggtgcgccc	catcaagcag	gtggcgccgg	gcctgggcgt	gcagaccgtg	gacattcaga
16321	tccccaccga	catggtatgt	gacaaaaaac	cctcgaccag	catcgagggtg	cagaccgacc
16381	cctggtctccc	agcctccacc	gctgcgctct	ccacttctac	cgccgcacag	gctaccgagc
16441	ctcccagaag	gcgaagatgg	ggccctgcca	accggtgat	gccccactac	gtattgcac
16501	ctccatttat	cccgacgcgc	ggctatcgcg	gcaccgggta	ctacgccagc	cgcaggcgcc
16561	cagccagcaa	acgccgcgcg	cgcaccgcca	cccgccgcgc	tctggccccc	gcccgcgtgc
16621	gcccgcgtaac	cacgcgcgcg	ggcgctcgcc	tcgttctgcc	caccgtgcgc	taccacccca
16681	gcaccccttta	atccgtgtgc	tgtgatactg	ttgcagagag	atggctctca	cttgccgcct
16741	gcgcaccccc	gtcccgaatt	accgaggaag	atcccgcgcg	aggagaggca	tggcaggcag
16801	ggccctcaac	cgcgcgcgcg	ggcgggccat	gcgcaggcgc	ctgagtgccg	cttttctgcc
16861	cgcgctcattc	cccataatcg	cggcgcccat	cggcacgac	ccgggcatag	cttcctgtgc
16921	gctgcaggcg	tcgcagcgcc	gttgatgtgc	gaataaagcc	tcttttagact	ctgacacacc
16981	tggctcctgta	tatttttaga	atggaagaca	tcaattttgc	gtccctggct	ccgcggcacg
17041	gcacgcggcc	gttcatgggc	acctggaacg	agatcggcac	cagccagctg	aacggggggc
17101	ccttcaattg	gagcagtgtc	tggagcgggc	ttaaaaattt	cggctcgacg	ctccggacct
17161	atgggaacaa	ggcctggaat	agtacacgg	ggcagttggt	aaggcgaaaag	ctcaaagacc
17221	agaacttcca	gcagaagggtg	gtggacggcc	tagcctcggg	cattaacggg	gtggtggaca
17281	tagcaaacca	ggccgtgcag	cgcgagataa	acagccgcct	ggaccgcgcg	ccgcccacgg
17341	tgggtggagat	ggaagatgca	actcctccgc	cgcaccaagg	cgagaagcgg	ccgcccggcc
17401	acgcggaggga	gacgatecctg	caggtggacg	agccgcctc	gtacgaggag	gccgtcaagg
17461	ccggcatgcc	caccacgcgt	atcatcgccg	cactggccac	tgggtaatg	aaaccggcca
17521	cccttgacct	gcctccgcca	cccagggccat	ctccaccgaa	ggcagctccg	gttgtgcagc
17581	cccctcctgt	ggcgaccgccc	gtgcgcgcgc	tccccgccc	ccgccaggcc	cagaactggc
17641	agagcacgct	gcacagtatc	gtgggcctgg	gagtgaagaa	tctgaagcgc	cgccgatgct
17701	attgagagag	aggaaagagg	acactaaagg	gagagcttaa	cttgtatgtg	ccttaccgcc
17761	agagaacgcg	cgaagatggc	taccctctcg	atgatgccgc	agtgggcgta	catgcacatc
17821	gccgggcagg	acgcctcgga	gtacctgagc	ccgggtctgg	tgcagtttgc	ccgcgccacc
17881	gacacgtact	tcagcctggg	caacaagttt	aggaacccca	cgggtggctcc	caccacgat
17941	gtgaccacgg	accggtccca	gcgtctgacg	ctgcgctttg	tgcccgtgga	tcgcgaggac
18001	accacgtact	cgtacaaggc	gcgttccact	ctggccgtgg	gcgacaaccg	ggtgctagac
18061	atggccagca	cttactttga	catccgcggc	gtcctggacc	gcggtcccag	cttcaaacc
18121	tactcgggca	cggcttacia	cagcctggcc	cccaaaggcg	cccccaactc	tagtcagtg
18181	gaacgaagcta	aagctaccaa	tgcgggtcaa	aggaagaaactc	acacatttgg	agtagccgct
18241	atgggaggag	aagacattac	agtgaagagt	cttcaaattg	gaactgatga	aactaaggaa

FIG. 5A-5

18301	gatggagagg	atgaaatttt	tgcagatcaa	acattccagc	cagaacctca	agtgggagaa
18361	cagaactggc	aagaaacgtt	tgttttctat	ggaggcagag	ctcttaagaa	agaaacccaaa
18421	atgaagccat	gttatggctc	ttatgcgaga	cccacaaatg	aaaagggagg	acaggctaaa
18481	tttacacttg	atgaaaaagg	tcagccaacc	aaaattcctg	atattacaat	ggatttcttt
18541	gatagtccac	aagatgatac	atcaggtgta	actaataagc	cagatattgt	catgtatgca
18601	gaaaatgtaa	atttagaagc	tcctgacaca	catgtagttt	acaaaccagg	caaagatgat
18661	tctagttctt	ccgctaacct	cacacaacag	gccatgccta	acagaccgaa	ctacatcggg
18721	ttcagagaca	actttgtggg	tcttatgtac	tacaatagta	ctggcaacat	gggtgtgctg
18781	gctggtcagg	cctctcagtt	gaatgctgtg	gtcgacttgc	aagacagaaa	caccgagctg
18841	tcttaccagc	tattgctaga	ttctctgggt	gacagaacca	gatactttag	catgtggaat
18901	tctgcagtgg	acagctatga	ccccgatgtc	aggatcattg	agaatcacgg	tgtggaagat
18961	gaacttccaa	actattgctt	cccactgaat	ggcagtgggt	ctaacagcac	atacaaaggt
19021	gttaaagctg	gaactggaaa	caattgggat	gacgatgaaa	atggttgcaa	acaaaatcag
19081	attggcactg	gcaacctgtt	cgccatggag	atcaacctcc	aggccaacct	aggcaagagt
19141	tttctgtact	cgaacgtggc	cctgtacctg	cccgactcct	acaagtacac	gccggccaac
19201	gtcacgtgc	ccaccaacac	caacacctac	gactacatga	acggccgcgt	ggtagccccc
19261	tcgctgggtg	acgcctacat	caacattggc	gcccgtgggt	cgctggaccc	catggacaat
19321	gtcaatccct	tcaaccacca	ccgcaacgcg	ggcctgcgct	accgctccat	gctcctgggc
19381	aacggccgct	acgtgccctt	ccacatccaa	gtgccccaaa	agttctttgc	catcaagaac
19441	ctgcttctgc	tccccggttc	ctacacctac	gagtggaaact	tccgcaagga	cgtaacatg
19501	atcctgcaga	gttccctcgg	caacgacctg	cgcgctcgacg	gcgcctccgt	ccgcttcgac
19561	agcgtcaacc	tctacgccac	cttcttcccc	atggcgcaca	acaccgcctc	caccctggaa
19621	gccatgctgc	gcaacgacac	caacgaccag	tccttcaacg	actacctctc	ggccgccaac
19681	atgctctacc	ccatccccgc	caaggccacc	aacgtgcccc	tctccatccc	ctcgcgcaac
19741	tgggcccgcct	tccgcggctg	gagtttcacc	cggctcaaga	ccaaggaaac	tccctccctc
19801	ggctcgggtt	tcgaccctta	ctttgtctac	tcgggctcca	tccccctacc	cgacggggacc
19861	ttctacctca	accacacctt	caagaaggte	tccatcatgt	tcgactcctc	ggtcagctgg
19921	cccggcaacg	accggctgct	cacgccgaac	gagttcgaga	tcaagcgcag	cgttgacggg
19981	gagggctaca	acgtggccca	atgcaacatg	accaaggact	ggttcctcgt	ccagatgctc
20041	ttccactaca	acatcgggta	ccagggtctc	cacgtgcccc	agggctacaa	ggaccgcatg
20101	tactccttct	tccgcaactt	ccagcccag	agcaggcagg	tggtcgatga	gatcaactac
20161	aaggactaca	aggccgtcac	cctacccttc	cagcacaaca	actcgggctt	caccggctac
20221	cttgcgccca	ccatgcgcca	ggggcagccc	taccccgcca	acttccccta	cccgtctatc
20281	ggctccaccg	cagttccctc	cgtcaccacg	aaaaagttcc	tctgcgacag	ggtcatgtgg
20341	cgcatcccat	tctccagcaa	ctttatgtcc	atgggcgccc	tcaccgacct	gggtcagaac
20401	atgctctatg	ccaactcggc	ccacgcgtc	gacatgacct	ttgaggtgga	ccccatggat
20461	gagcccacc	tctcttatct	tctcttcgaa	gttttcgacg	tggtcagagt	gcaccagccg
20521	caccgcggcg	tcatecagggc	cgtctacctg	cgcacgccct	tctccgcggg	caacgctacc
20581	acttaagcat	gagcggctcc	agcgaacaag	agctcgcggc	catcgtgcgc	gacctgggat
20641	gcggggcccta	ctttttggga	acccacgaca	agcgttcccc	tggcttccct	gccggcgaca
20701	agctggcctg	cgccatcgtc	aacacggccg	gcccgcgagac	cggaggcggtg	cactggctcg
20761	ccttttgctg	gaatccgcgc	tcgcgcacct	gctacatggt	cgacctcttt	gggttctcgg
20821	accgccggct	caagcagatt	tacagcttcg	agtacgaggc	catgctcgcg	cgaagcgcgc
20881	ttgctctctc	gcccgaaccg	tgtctcagcc	tcgagcagtc	cacccagacc	gtgcaggggc
20941	ccgactccgc	cgcttgcgga	cttttttggt	gcatgttttt	gcatgccttc	gtgcactggc
21001	ccgaccgacc	catggacgga	aacccccacca	tgaacttgct	gacggggggtg	ccaaacggga
21061	tgctacaatc	gccacagggtg	ctgcccaccc	tcaggcgcaa	ccaggaggag	ctctaccgct
21121	tcctcgcgcg	ccactcccc	tactttcgat	cccaccgcgc	cgccatcgaa	aacgccaccg
21181	cttttgataa	aatgaaaaca	ctgcgtgtat	ctcaataaac	agcactttat	tttacatgca
21241	ctggagtata	tgcaagttat	ttaaaagtcg	aaggggttct	cgcgctcgtc	gttgctgcgc
21301	gcgctgggga	gggccacggt	gcggtactgg	tacttgggaa	gccacttgaa	ctcggggatc
21361	accagtttgg	gcaactgggt	ctcgggggaa	gtctcgctcc	acatgcgcgc	gctcatctgc
21421	agggcgcccc	gcatgtccgg	gcccggagatc	ttgaaatcac	aattggggcc	gggtgctctgc
21481	gcgcgcgagt	tgcggtacac	gggggttgag	cactggaaca	ccattagact	gggtgacttc
21541	acactggcaa	gcacgctctt	gtcgctgac	tgatccttgt	ccaggctctc	ggcggtgctc
21601	aggccgaacg	gggtcatctt	gcacagctgg	cggcccagga	agggcacgct	ctgaggcttg
21661	tggttacact	cgcagtgcac	gggcacagc	atcatccccg	cgccgcgctg	catattcggg
21721	tagagggcct	tgacgaaggc	cgtgatctgc	ttgaaagctt	gctgggcctt	agccccctcg
21781	ctgaaaaaca	ggccgcagct	cttcccgcga	aactgggtat	tcccgcaccc	ggcatctatg
21841	acgcgcagc	gcgcgtcatg	gttcgctcag	tgcaccacgc	tacgtcccca	gcgggtctgg
21901	gtcaccttgg	ccttgctggg	ctgctccttc	aacgcgcgct	gcccgttctc	gctgggtcaca

FIG. 5A-6

21961	tccatctcca	ccacgtggtc	cttgtggatc	atcacctgcc	catgcagaca	cttgagctga
22021	ccctcgacat	cgcagcagcc	atgatccac	agggcgagc	cggtgcactc	ccagttctta
22081	tgcgcgatcc	cgctgtggct	gaagatgtaa	ccttgcaaca	ggcgacccat	gacggtgcta
22141	aatgctttct	gggtggtgaa	ggtcagttgc	agaccgcggg	cctcctcggt	catccaggctc
22201	tggcacatct	tttgggaagat	ctcggctctgc	tcgggcatga	gcttghtaagc	atcgcgcagg
22261	ccgctgtcga	cgcggtagcg	ttccatcagc	acgttcatgg	tatccatgcc	cttctcccag
22321	gacgagacca	gaggcagact	caggggggtg	cgcacgttca	ggacaccggg	ggtcgcaggc
22381	tcgacgatgc	gttttccgtc	cttgccctcc	ttcaacagaa	ccggaggctg	gctgaatccc
22441	actcccacga	ttacggcatc	ttcctggggc	atctcttcgt	cggggtctac	cttggtcaca
22501	tgcttggctt	ttctggcttg	cttctttttt	ggagggtgtg	ccacggggac	cacgtcctcc
22561	tcggaagacc	cggagcccac	ccgctgatac	tttcggcgct	tggtgggcag	aggaggtggt
22621	ggcggcgagg	ggctcctctc	ctgctccggc	ggatagcgcg	ccgaccctg	gccccggggc
22681	ggagtggcct	ctcgctccat	gaaccggcgc	acgtcctgac	tgccgcggc	gctgttttc
22741	taggggaaga	tggaggagca	gccgcgttaag	caggagcagg	aggaggactt	aaccaccac
22801	gagcaaccca	aaatcgagca	ggacctgggc	ttcgaagagc	cggctcgtct	agaaccccca
22861	caggatgaac	aggagcacga	gcaagacgca	ggccaggagg	agaccgacgc	tgggctccag
22921	catggctacc	tgggaggaga	ggaggatgtg	ctgctaaaac	acttgcagcg	ccaatccatc
22981	atcctccggg	acgccctggc	cgaaccggagc	gaaacccctc	tcagcgtcga	ggagctgtgt
23041	cgggcctacg	agctcaacct	cttctcgccg	cgcgtgcccc	ccaaacgcc	cgggacggc
23101	acctgcgagc	ccaacccgcg	tctcaacttc	tatcccgctt	ttgcgggtccc	cgaggcccta
23161	gccacctatc	acatcttttt	caagaaccaa	aagatccccg	tctcctgccc	cgccaaccgc
23221	acccgcgccc	acgcgctcct	cgctctgggg	cccggcgccg	gcatacctga	tatcgcttcc
23281	ctggaagagg	tgcccaagat	cttcgaaggg	ctcggtcggg	acgagacgcg	cgcggaac
23341	gctctgaaaag	aaacagcaga	ggaagagggg	cacactagcg	ccctggtaga	gttgaaggc
23401	gacaacgcc	ggctggccgt	gctcaagcgc	acgctcgagc	tcacccactt	cgctaccac
23461	gccgtcaaac	tcccgccaa	ggcatgcgt	cgcacatgg	atcagctcat	catgccccac
23521	atcgaggccc	tcgatgaaag	tcaggagcag	cgccccgagg	acgcccggcc	cgtggtcagc
23581	gacgagcagc	tcgcgcgttg	gctcgggacc	cgcgaccccc	aggctttgga	acagcggcgc
23641	aagctcatgc	tggcgtgggt	cctggtcacc	ctcgagctcg	aatgcatgcg	ccgcttcttc
23701	agcgaccccc	agaccctgcg	taaggtcgag	gagaccctgc	actacacttt	caggcacggt
23761	ttcgtcaggg	aggcctgcaa	gatctccaac	gtggagctga	ccaacctggt	ctcatgctg
23821	gggatcctgc	acgagaaccg	cctgggacag	accgtgctcc	actctactct	gaagggcgag
23881	gcgcgtcggg	actatgtccg	cgactgtgta	tttctcttta	tctgccacac	ctggcaagca
23941	gccatgggcg	tgtggcagca	gtgtctcgag	gacgaaaatc	tgaaggagct	ggacaagctt
24001	cttgctagaa	accttaaaaa	gctgtggacg	ggcttcgacg	agcgcaccgt	cgctcggac
24061	ctggccgaga	tcgttttttc	agaacgcctg	aggcagacgc	tgaaaaggcg	tgaaagcgac
24121	ttcatgagcc	agagcatggt	gcaaaactac	cgacttttca	ttctcgagcg	atctgggatg
24181	ctacccgcc	cctgcaacgc	attccctctc	gactttgtcc	cgctgagcta	ccgcgagtgt
24241	ccccgcgccc	tgtggagcca	ctgctatctc	ttgcagctgg	ccaactacat	cgctaccac
24301	tcggacgtga	tcgaggacgt	gagcggcgag	gggtttctcg	agtgccactg	ccgctgcaac
24361	ctgtgctccc	cgcaccgctc	cctggtctgc	aacccccagc	ttctgagcga	gaccaggtc
24421	atcggtacct	tcgagctgca	aggctccgca	gagtcacccg	ctccgctgaa	ctcacgcgc
24481	gggttgtgga	cttccgcgta	cttcgcgcaa	tttgtaccgc	aggactacca	cgcccatgaa
24541	ataaagttct	tcgaggacca	atcgcgcccc	cagcacgcgg	atctcacggc	ctgcgtcatc
24601	accagggcg	cgatcctcgc	ccaattgcac	gccatccaaa	aatcccgcga	agagtttctt
24661	ctaaaaaagg	gtagaggggt	ctacctggac	ccccagacgg	gcgaggtgct	caaccggggt
24721	ctcccccagc	atgccgagga	agaagcagga	gccgctagt	gagcagatgg	aagaagaatg
24781	ggcagccag	gcagaggagg	acgaatggga	ggaggagaca	gaggagggaag	aattgggaaga
24841	ggtggaagag	gagcaggaaa	cagagcagcc	cgctcgccgca	ccatccgcgc	cggcagcccc
24901	gccggtcacg	gatacaacct	ccacagctcc	ggccaagcct	cctcgtagat	gggatcgagt
24961	gaagggtgac	ggtaagcacg	agcggcaggg	ctaccgatca	tggagggtcc	acaaagccgc
25021	gatcatcgcc	tgcttgcaag	actgcggggg	gaacatcgct	ttcgccccgc	gctacctgct
25081	cttccaccgc	ggggtgaaca	tccccgcgaa	cgtgttgcat	tactaccgtc	accttcacag
25141	ctaagaaaaa	gcaagtaaga	ggagtcgccc	gaggaggcct	gaggatcgcg	gcgaacgagc
25201	cctcgaccac	cagggagctg	aggaaccgga	tcttccccac	tctttatgcc	atttttcagc
25261	agagtcgagg	tcagcagcaa	gaactgaaag	taaaaaaccg	gtctctgcgc	tcgctcacc
25321	gcagttgctt	gtaccacaaa	aacgaagatc	agctgcagcg	cactctcgaa	gacgcgagg
25381	ctctgttcca	caagtaactgc	gcgctcactc	ttaaagacta	aggcgcgccc	accgggaaaa
25441	aaggcgggaa	ttacctcatc	gccaccatga	gcaaggagat	tccaccctt	tacatgtgga
25501	gctatggacc	ccagatgggc	ctggccgcgg	gcgcctccca	ggactactcc	acccgcatga
25561	actggctcag	tgccggcccc	tcgatgatct	cacgggtcaa	cggggtccgt	aaccatcgaa

FIG. 5A-7

25621	accagatatt	gttggagcag	gcggcgggtca	cctccacgcc	cagggcaaag	ctcaaccgcg
25681	gtaattggcc	ctccaccctg	gtgtatcagg	aaatccccgg	gccgactacc	gtactacttc
25741	cgcgtagcgc	actggccgaa	gtccgcatga	ctaactcagg	tgtccagctg	gccggcgccg
25801	cttcccggtg	cccgcctccg	ccacaatcgg	gtataaaaac	cctgggtgatc	cgaggcagag
25861	gcacacagct	caacgacgag	ttggtgagct	cttcgatcgg	tctgcgaccg	gacggagtgt
25921	tccaactagc	cggagccggg	agatcgtcct	tcactcccaa	ccaggcctac	ctgaccttgc
25981	agagcagctc	ttcgggagcct	cgctccggag	gcacgcgaac	cctccagttc	gtggaggagt
26041	ttgtgccctc	ggtctacttc	aaccccttct	cgggatcgcc	aggcctctac	ccggacgagt
26101	ttataccgaa	cttcgacgca	gtgagagaag	cgggtggacgg	ctacgactga	atgtcccatg
26161	gtgactcggc	tgagctcgct	cggttgaggc	atctggacca	ctgccgccgc	ctgcgctgct
26221	tcgcccggga	gagctgcgga	ctcatctact	ttgagtttcc	cgaggagcac	cccaacggcc
26281	ctgcacacgg	agtgcggatc	accgtagagg	gcaccaccga	gtctcacctg	gtcaggttct
26341	tcacccagca	acccttcctg	gtcagcggg	accggggagc	taccacctac	accgtctact
26401	gcctctgtcc	taccccgaa	ttgcatgaga	atctttgctg	tactctttgt	ggtgagttta
26461	ataaaagctg	aactaagaac	cttcttttga	atcccttgct	atcatcaa	caacaagacc
26521	atcaacttca	cctttgagga	acaggtgaac	tttacctgca	agccacacaa	gaagtacatc
26581	atctgggttt	atcacaacac	tactctagca	gtagccaaca	cctgctcgaa	cgacggtgtt
26641	ctcctaccta	acaatctcac	cagtggacta	accttctcag	ttaaaagggc	aaagctaatt
26701	cttcatcgcc	ctattgtaga	aggaacttac	cagtgtcaga	gcggaccttg	cttccacagt
26761	ttcactttgg	tgaacgttac	cggcagcagc	acagccgctc	cagaaacatc	taaccttctt
26821	tctgatacta	acaaacctcg	tgtcggaggt	gagctttggg	ttccatctct	aacagagggg
26881	gggagttcta	ttgaagtggg	tgggtatttg	atcttagggg	tggtcattgg	tgggtgcata
26941	gcagtgtgtg	atcaacttcc	ttgctgggtc	gaaatcaggg	tatttatctg	ctgggtcaga
27001	cattgtgggg	aggaacctatg	aaggggctct	tgctgattat	cctttccctg	gtgggggggtg
27061	tgctgtcatg	ccacgaacag	ccacgatgta	acattaccac	aggcaatgag	aggaacgact
27121	gctctgtagt	tatcaaatgc	gagcaccatt	gtcctctcaa	catcacattc	aagaataaga
27181	ccatgggaaa	tgtatgggtg	ggattctggc	aaccaggaga	tgagcagaac	tacacgggtc
27241	ctgtccatgg	tagcgatggc	aatcacactt	tcggtttcaa	attcattttt	gaagtcatgt
27301	gtgatatac	actacatgtg	gctagacttc	atggcttggtg	gccccctacc	aaggagaaca
27361	tgggtgggtt	ttctttggct	tttgtgatca	tggcctgctt	gatgtcaggt	ctgctggtag
27421	gggctctagt	gtggtttctg	aaacgcgaagc	ccaggtagcg	aaatgaggag	cttccacagt
27481	tgtctataaat	ttcttttctc	ttcgcacaac	catgaataca	gtgttccgta	tctgtctgct
27541	ctctcttctt	gtagctttcg	gtcaggcagg	aattcatatt	attaatgcta	catggtggga
27601	taataataact	ttagtgggac	cctcagatac	tccagttacc	tggtagatg	gcaagggatt
27661	gcaattttgt	gacggaagta	cagttaagaa	tccgcagatc	agacatactt	gtaatgatca
27721	aaacttaact	ctgattcatg	ttaacaaaaa	ccatgaaaga	acatacatgg	gttcacagca
27781	tgacagtaag	ggaaaagtag	actataaggt	tacagtcatc	ccacctcttc	gtctactgt
27841	aaagccacaa	ccagatccag	aaaatgtctt	tgtttatatg	ggaaataatg	taactttagt
27901	tggacctcca	ggaattccag	ttagttggta	ttatcataat	ggcacacagt	tctgcgatgg
27961	agataaaaatt	attcatccag	aattcaacca	cacctgtgat	aaacaaaacc	ttacactgct
28021	gtttgtaaac	tttacacatg	atggaggcta	tcttggattc	aattacaaag	gtactcagag
28081	aattcagtat	gaggttatag	ttttagatcg	atttccaaat	tctggtcaga	taggaaaattg
28141	agaacaaaagt	gaggaaaacg	aacagaaaca	tactgagcat	aataaggctg	gacaaaagca
28201	gggtatagat	acaaatcaaa	agaaagctaa	taacagacaa	aagccatctc	aaaggccatc
28261	aagaagacgg	ccgacaaaca	ctcctgagac	aaaacaactt	acagtgtcta	ttgggtctaa
28321	cttaacttta	gttgggtccag	atggaaaagt	cacttgggtat	gatgggtgatt	taaaaagacc
28381	atgtgaagaa	caaaactata	ggcttccaca	tcagtgtagt	gctcagaact	taactttaat
28441	taatgtaact	aaatctcatg	agggaactta	ctatggcact	aatgacaaa	acgaaagcaa
28501	aagatacaga	gtgaaaagtga	actatacaaa	ttctcaagct	gtaaaaatta	acccatatac
28561	cagacctact	actcctgatc	agaaacacag	atctgaatta	caaattgaaa	ataatgcaaa
28621	tgatgaagaa	tcaaaaattc	catctactac	tgtggcaatc	gtgggtgggag	tgattgcggg
28681	cttcataact	ataatcattg	tcattctgtg	ctacatctgc	tgccgcaagc	gtcccagggc
28741	atacaatcat	atggtagacc	cactactcag	cttctcttac	tgagactcag	tcactttcat
28801	ttcagaacca	tgaaggcttt	cacagcttgc	gttctgttta	acataatcac	acttagtgta
28861	gctgcaaatg	gttttaaaaca	tgttaatggt	accagattaa	gtaatgtaac	actgacagga
28921	gctggaatta	atactacatg	gacaggggtat	tttaatgagg	gtccaaaagg	aaaaaatggg
28981	tggatgaata	tttgcacatg	gggcgatcct	agatatgtgt	gccatggaaa	tagcagtact
29041	attactaatc	ttacagttgt	ggcacttcta	aatttaacca	ctaacagaag	atttaaagca
29101	gaaagtttta	ctagtaacga	tggttatgaa	actaccagtg	caaaatttta	tgaatttaaa
29161	attattgagc	ttccaacaac	taccagacc	accacagtta	ggacaacaca	gcctaccact
29221	gtgcccacta	cacatccaac	caccacagtc	agtacaacta	ttgagaccac	tactcatact

FIG. 5A-8

29281	acacagctag	acacaacagt	gcagaatact	actttattga	ttgggttttt	actgagagga
29341	aatgaaagta	ctactgaaca	gacagaggct	acctcaagtg	ccttcagcag	cactgcaaat
29401	ttaacttcgc	ttgcttgga	taatgaaacc	ggagtatcat	tgatgaatcg	acagccttac
29461	tcaggtttgg	atattcaaat	tacttttctg	gttgtctgtg	ggatctttat	tcttgcggtt
29521	cttctgtact	ttgtctgctg	caaagccaga	gagaaatcta	ggcggcccat	atacaggcca
29581	gtaatcgggg	aacctcagcc	tctccaagtg	gatggaggct	taaggaatct	tctcttctct
29641	tttacagtat	ggtgatcagc	catgattcct	aggttcttcc	tatttaacat	cctgttctgt
29701	ctcttcaaca	tctgtgctgc	cttcgcgcc	gtctcgca	cctcgccga	ctgtctaggg
29761	cctttcccaa	catactctct	ccttgccctg	ctaacctgca	cctgctctg	cagcattgtc
29821	tgcgtggtca	tcacctttct	gcagctcatc	gactggtgct	gcgcgcgcta	caattatctc
29881	caccacagtc	ccgaatacag	ggacgagaac	gtagccagaa	tcttaaggct	catctgacca
29941	tgcagcctct	gctcatgctg	atatccctcc	tatccctgct	ccttgccact	tctgtctgatt
30001	actctaaatg	caaattcgcg	gacatattga	atttcttaga	ttgctatcag	gagaaaaattg
30061	atatgccctc	ctattacttg	gtgattgttg	gggtagtc	ggtctgtc	tgcatcttct
30121	ttgccattat	gatctacccc	tgttttaatc	ttggctggaa	ctctgttgag	gcattcacat
30181	acacactaga	aaacagttca	ctagcctcca	cgccaccacc	cacaccgcct	ccccgcagaa
30241	atcagttccc	tatgattcag	tacttagaag	agccccctcc	ccggccccct	tccactgtta
30301	gctactttca	cataaccggc	ggcgatgact	gaccacctgg	acctcgagat	ggacggccag
30361	gcctccgagc	agcgcatcct	gcaactgcgc	gtccgacagc	agcaggagcg	ggccgccaag
30421	gagctcctcg	atgccatcaa	catccaccag	tgcaagaagg	gcatcttctg	cctggtaag
30481	caggcaaaga	tcacctacga	gctcgtgtcc	ggcggcaagc	agcatcgct	cgctatgag
30541	ctaccccagc	agaagcaaaa	gttcacctgc	atggtggg	tcaaccccat	agtcaccac
30601	cagcagtcgg	gcgagaccaa	cggtgcac	cactgctcct	gcgaaagccc	cgagtgcac
30661	tactccctcc	tcaagaccct	ttgcggaact	cgcgacctcc	tccccatgaa	ctgatgttga
30721	ttaaaagccc	aaaaaccaat	caaacccttc	cccaattact	cataagaata	aatcattgga
30781	actaatcatt	caataaagat	cacttacttg	aaatctgaaa	gtatgtctct	ggtgtagt
30841	ttcagcagca	cctcggaacc	ctctcccag	ctctggtact	ccagtcctcg	gcgggcg
30901	aacttctctc	acaccttgaa	agggatgtca	aattcctggt	ccacaatttt	cattgtcttc
30961	cctcagatga	caaagaggct	ccgggtggaa	gatgacttca	acccgtctca	cccctatggc
31021	tcgcgcgga	atcagaatat	ccccttctct	actccccct	ttgtttcttc	cgatggattc
31081	caaaacttcc	cacctggggt	cctgtcactc	aaactggctg	acccaatcgc	catcactaat
31141	ggggatgttt	cactcaagg	gggagggggt	cttactgttg	aaaaagatag	tggaaatcta
31201	aagggtgaacc	ctaaggctcc	cttgcaagtt	acaactgata	aacagttgga	aattgcactg
31261	gcttatccat	ttgaagtcag	taatggcaag	cttggcataa	aagcaggtca	tggattgaaa
31321	gtcattgaca	aaattgctgg	tttggaaggt	ttggcaggta	cgcttgtagt	tttgactgga
31381	aaaggaatag	gtactgaaaa	ctctgaaac	agtgtgggt	caagtagagg	agttgggtata
31441	aacgtaagac	ttgctaagaa	tggaggtctg	cttttgata	aaaagggtga	tttagttgct
31501	tggataaaac	atgatgacag	acgcactcta	tggacaactc	ccgacccatc	cccaaattgt
31561	acaatcgatc	aggaaaggga	ttcaaagctc	acttttagtat	taacaaaatg	tggcagtc
31621	attttggcta	atgtctcttt	acttgttgta	aaaggaaaat	ttagtaacat	aaacaataat
31681	actaatccaa	ctgataaaaa	aatcacagta	aagctacttt	ttaatgaaaa	gggagtatta
31741	atggactgtt	cgacacttaa	gaaagaatat	tggaaactaa	gaaatgata	ttctactgta
31801	tctcaggcct	atgataatgc	agttcctttt	atgccaaaca	taaaagctta	tcctaaccct
31861	accacagaca	cttcggctaa	accagaagat	aaaaaaagtg	ctgctaaaag	atacattgtg
31921	agcaatgtct	atattggagg	cttgccagat	aaaactgttg	ttataactat	taagtttaat
31981	gcagaaactg	aatgtgctta	ttcgattacc	tttgatttca	catgggcaaa	aacctttgaa
32041	gatgtgcagt	ttgattcctc	ctcttttacc	ttttcttata	ttgcccaga	aaatgaggac
32101	gaagacaaat	aaaatgtttt	aaaatgaatt	catgtatctt	tattgatttt	tacaccagca
32161	cgggtagtca	gtctcccacc	accagcccat	ttcacagtgt	aaacgattct	ctcagcacgg
32221	gtggccttaa	atagggaat	gttctgatta	gtgcgggaac	tggacttggg	gtctataatc
32281	cacacagttt	cctggcgagc	caaacggggg	tcggtgattg	agatgaagcc	gtcctctgaa
32341	aagtcatcca	agcgggcctc	acagtccaag	gtcacagtct	ggtgaaacga	gaagaacgca
32401	catgattcata	ctcggaaaac	aggatgggtc	tgtgcctctc	catcagcgcc	ctcaacagtc
32461	tctgcgcgcg	gggctcggtg	cggctgctgc	agatgggata	gggatcacaa	gtctctctga
32521	ctatgatccc	cacagccttc	agcatcagtc	tcttggtg	tcgggcacag	caccgcatcc
32581	tgatctcgct	catgttctca	cagtaagtgc	agcacataat	caccatgtta	ttcagcagcc
32641	cataattcag	ggtgctccag	ccaaaactca	tggtggggat	gatggaaacc	acgtgaccat
32701	cgtaccagat	gcggcagtat	atcagatgcc	tgccccctcat	gaacacactg	cccatataca
32761	tgatctcttt	gggcatgtct	ctgttcacaa	tctgacggta	ccagggaagc	cgctggttga
32821	acatgcaccc	gtaaatgact	ctcctgaacc	acacggccag	cagggtgctc	ccccgcgac
32881	actgcaggga	gcccggggat	gaacagtggc	aatgcaggat	ccagcgctcg	taccgcctca

FIG. 5A-9

32941	ccatctgagc	tctcaccaag	tccagggtag	cggggcacag	gcacactgac	atacatcttt
33001	ttaaaatttt	tatttcctct	ggagtcaaga	tcatatccca	ggggactgga	aactcttggg
33061	gcagggtaaa	gccagcagca	catggtaatc	cacggacaga	acttacatta	tgataatctg
33121	catgatcaca	atcaggcaac	aggggatgtt	gttcagtcag	tgaagccctg	gtttcctcat
33181	cagatcgtgg	taaacggggc	ctgcgatatg	gatgatggcg	gagcgagctg	gattgaaatc
33241	cggtttgcat	tgtagtggat	tctcttgctg	accttgctgt	acttctgcca	gcagaaatgg
33301	gcccttgaac	agcagatacc	cctcctgcgg	ccgtcctttc	gctgctgccc	ctcagtcac
33361	caactgaagt	acatccattc	tcgaagattc	tggagaagtt	cctctgcac	tgatgaaaca
33421	aaaaacccgt	ccatgcgaat	tccccctcat	acatcagcca	ggactctgta	ggccatcccc
33481	atccagttaa	tgctgccttg	tctatcattc	agagggggcg	gtggcaggat	tggaagaacc
33541	atttttattc	caaacgggtc	cgaaggacga	taaagtgcaa	gtcacgcagg	tgacagcggt
33601	cccctccgct	gtgctggtgg	aaacagacag	ccagggtcaaa	acccactcta	ttttcaaggt
33661	gctcgaccgt	ggcttcgagc	agtggctcta	cgcgtacatc	cagcataaga	atcacattaa
33721	aggctggccc	tccatcgatt	tcataaatca	tcagggttaca	ttcctgcacc	atccccaggt
33781	aattctcatt	tttccagcct	tggattatct	ctacaaattg	ttggtgtaag	tccactccgc
33841	acatgtggaa	aagctccccc	agtgcctcct	ccactttcat	aatcaggcag	accttcataa
33901	tagaaacaga	tcctgctgct	ccaccacctg	cagcgtgttc	aaaacaacaa	gattcaataa
33961	ggttctgccc	tccgccttga	gctcgcgcct	caatgtcagc	tgcaaaaaat	cacttaagtc
34021	ctggggccact	acagctgaca	attcagagcc	agggctaagc	gtgggactgg	caagcgtaag
34081	ggaaaacttt	aatgctccaa	agctagcacc	caaaaactgc	atgctggaat	aagctctctt
34141	tgtgtctccg	gtgatgcctt	ccaaaatgtg	agtgataaag	cgtggtagtt	tttctttaat
34201	cattttgcgt	atagaaaagt	cctgtaaata	agtcactagg	accccaggga	ccacaatgtg
34261	gtagcttaca	ccgcgtcgct	gaagcatggt	tagtagagat	gagagtctga	aaaacagaaa
34321	gcatgcacta	aactaagggt	gctattttca	ctgaaggaaa	aatcactctc	tccaacaaca
34381	gggtacccac	tgggtggccc	ttgcggacat	acaaaaatcg	gtccgtgtga	ttaaaaagca
34441	gcacagtaag	ttcctgtctt	cttcgggcaa	aaatcacatc	ggactgggtt	agtatgtccc
34501	tggcatggta	gtcattcaag	gccataaatc	tgccctgata	tccagtagga	accagcacac
34561	tcacttttag	gtgaagcaat	accaccccat	gcggaggaat	gtggaaagat	tcaggggcaa
34621	aaaaattata	tctattgcta	gtcccttcc	ggacggggag	aatccctcca	ggactatcta
34681	tgaaagcata	cagagattca	gccatagctc	agcccgtcta	ccagtagaca	gagagcacag
34741	cagtacaagc	gccaacagca	gcgactgact	acccactgac	ccagctccct	atttaaaggc
34801	gccttacact	gacgtaatga	ccaaagggtc	aaaaaccccc	ccaaaaaaaa	acacacacgc
34861	cctgggtgtt	ttttgcgaaa	acacttccgc	gttctcactt	cctcgtattg	atttcgtgac
34921	ttacttccg	ggttcccacg	ttacgtcact	tctgccctta	catgtaactc	agtcgtaggg
34981	cgccatcttg	cccacgtcca	aaatggcttc	catgtccagc	cacgcctccg	cggcgaccgt
35041	tagccgtgcg	tcgtgacgtc	atttgcacat	tcttctctcg	tccaatcagc	gctggccccg
35101	ccctaaattc	aaaagctcat	ttgcatgtta	acttttggtt	actttgtggg	gtatattatt
35161	gatgatc					

FIG. 5A-10

Grp	Vaccine at Wk 0, Wk 4	Monkey ID	Pre		Wk 4		Wk 8		Wk 12	
			Mock	Gag	Mock	Gag	Mock	Gag	Mock	Gag
1	Ad24ΔE1gagΔOrf6Ad5Orf6 10 <sup>^</sup> 11 vp	00C072	3	4	4	381	3	150	3	68
		00C178	3	3	1	559	1	743	0	635
		00C222	0	3	1	369	1	753	0	670
		00D011	1	9	9	211	4	273	0	520
		00D023	0	6	0	295	1	459	1	368
		00D031	15	5	10	103	1	101	1	40
2	Ad24ΔE1gagΔOrf6Ad5Orf6 10 <sup>^</sup> 10 vp	99C168	4	6	0	118	5	241	3	209
		99C170	10	5	5	241	3	141	3	103
		99C173	1	3	0	23	0	14	0	21
3	Ad24ΔE1gagΔE4Ad5Orf6 10 <sup>^</sup> 10 vp	99C154	0	3	0	93	0	60	1	53
		99C158	1	0	1	141	0	101	1	120
		99C177	0	0	0	45	0	39	0	79
4	MRKAd5-HIVgag 10 <sup>^</sup> 11 vp	00C018	1	5	13	1025	0	824	3	753
		00C034	0	4	5	219	5	404	0	491
		00C058	4	4	3	1086	0	440	0	439
5	MRKAd5-HIVgag 10 <sup>^</sup> 10 vp	99C218	0	3	5	2500	0	1580	10	1655
		99C227	6	1	4	529	5	365	5	1004
		99D185	ND	ND	0	425	0	310	0	271

FIG. 6

Vaccine at Wk 0, Wk 4	Monkey ID	Gag-Specific (Wk 12)	
		%CD4	%CD8
Ad24ΔE1gagΔOrf6Ad5Orf6 10 <sup>11</sup> vp	00C072	0.02	0.02
	00C178	0.05	0.38
	00C222	0.02	0.40
	00D011	0.02	0.27
	00D023	0.01	0.11
	00D031	0.01	0.01
MRKAd5-HIVgag 10 <sup>11</sup> vp	00C018	0.05	0.41
	00C034	0.06	0.18
	00C058	0.02	0.28

FIG. 7



Grp	Vaccine at Wk 0, Wk 4	Monkey ID	Wk 4	WK 8
1	Ad24ΔE1gagΔOrf6Ad5Orf6 10 <sup>11</sup> vp	00C072	<10	77
		00C178	<10	26
		00C222	<10	423
		00D011	<10	98
		00D023	<10	<10
		00D031	<10	<10
2	Ad24ΔE1gagΔOrf6Ad5Orf6 10 <sup>10</sup> vp	99C168	<10	<10
		99C170	<10	<10
		99C173	<10	<10
3	Ad24ΔE1gagΔE4Ad5Orf6 10 <sup>10</sup> vp	99C154	<10	<10
		99C158	<10	<10
		99C177	<10	<10
4	MRKAd5-HIVgag 10 <sup>11</sup> vp	00C018	34	1017
		00C034	14	423
		00C058	46	934
5	MRKAd5-HIVgag 10 <sup>10</sup> vp	99C218	20	99
		99C227	40	767
		99D185	17	342

FIG. 8

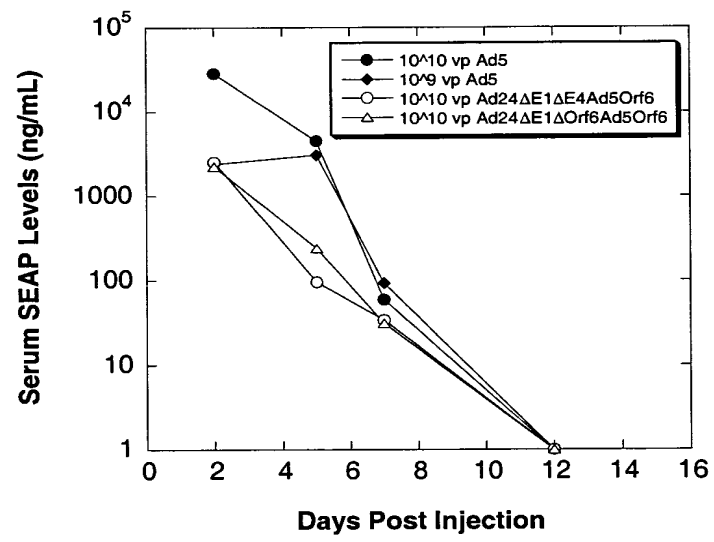


FIG. 9

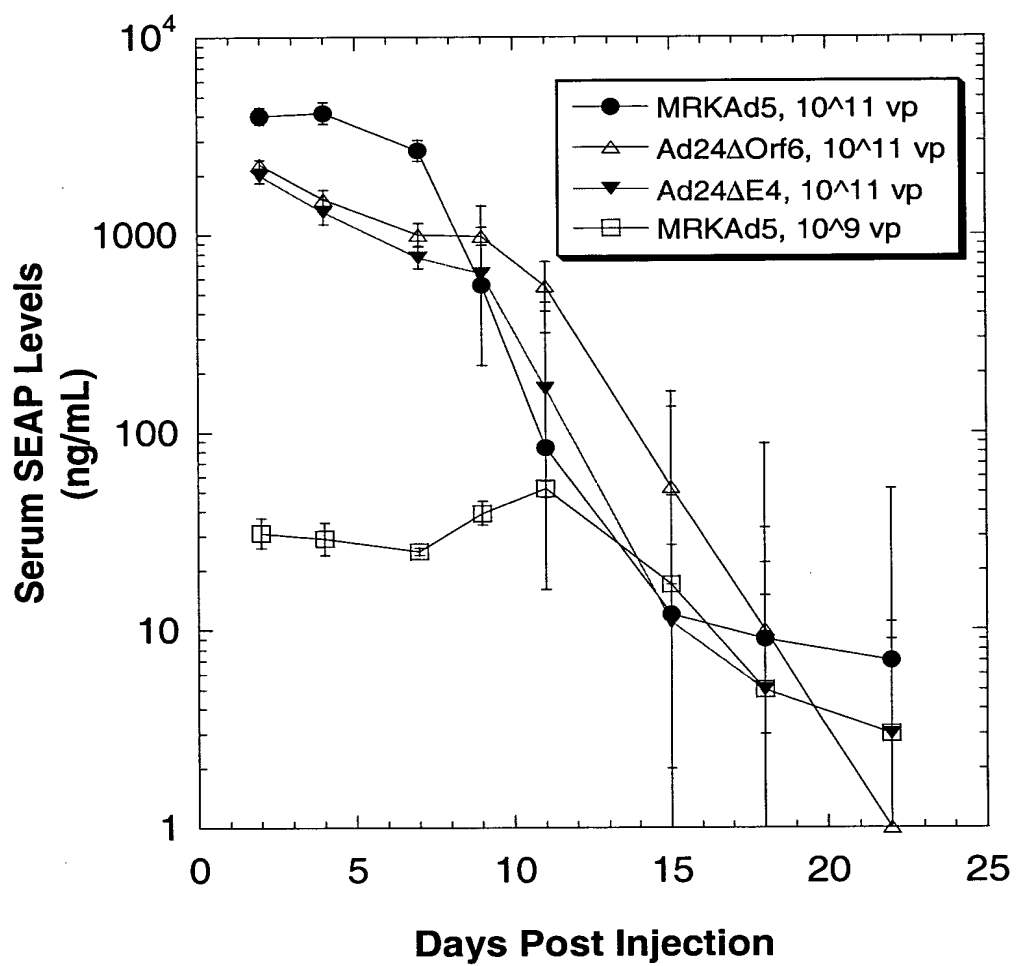


FIG. 10

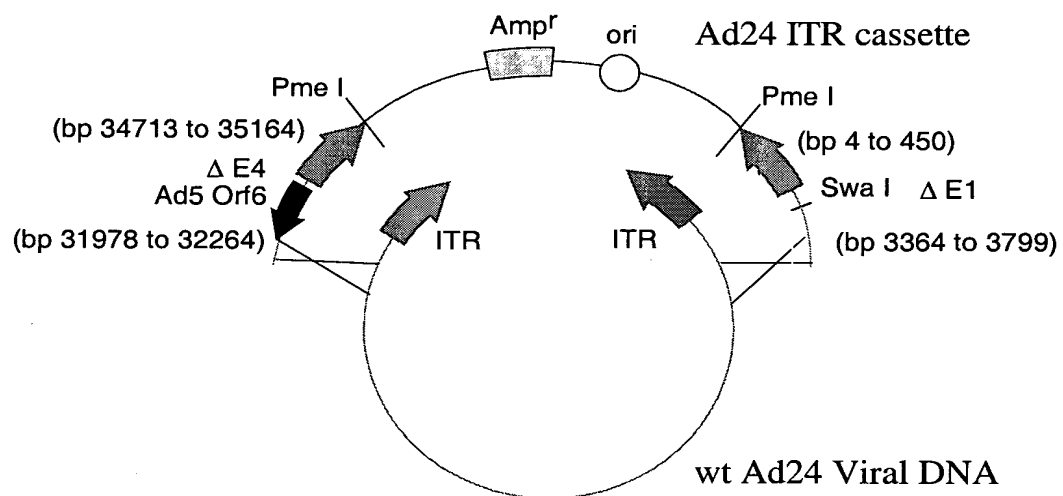


FIG. 11

**Sequence of the open reading frame for FL-gag (human codon optimized)**

atgggtgctagggcttctgtgctgtctgggtggtgagctggacaagtgggagaagatcagggtgaggcctgggtggc  
aagaagaagtacaagctaaagcacattgtgtgggcctccagggagctggagaggtttgctgtgaaccctggcctg  
ctggagacctctgaggggtgcaggcagatcctgggccagctccagccctccctgcaaacaggctctgaggagctg  
aggtccctgtacaacacagtgggtaccctgtactgtgtgcaccagaagattgatgtgaaggacaccaaggaggcc  
ctggagaagattgaggaggagcagaacaagtccaagaagaaggcccagcaggctgctgctggcacaggcaactcc  
agccagggtgtcccagaactaccccatgtgtgcagaacctccagggccagatgggtgcaccaggccatctccccccgg  
accctgaatgcctgggtgaagggtgggtggaggagaaggccttctcccctgaggtgatccccatgttctctgccctg  
tctgaggggtgccacccccaggacctgaacaccatgctgaacacagtggggggccatcaggctgccatgcagatg  
ctgaaggagaccatcaatgaggaggctgctgagtgggacaggctgcatcctgtgcacgctggccccattgcccc  
ggccagatgagggagcccaggggctctgacattgctggcaccacctccaccctccaggagcagattggctggatg  
accaacaacccccccatccctgtgggggaaatctacaagaggtggatcatcctgggcctgaacaagattgtgagg  
atgtactccccacctccatcctggacatcaggcagggccccaaggagcccttcagggaactatgtggacaggttc  
tacaagaccctgagggctgagcaggcctcccaggaggtgaagaactggatgacagagaccctgctgggtgcagaat  
gccaacctgactgcaagaccatcctgaaggccctggggcctgctgccaccctggaggagatgatgacagcctgc  
caggggggtggggggccctgggtcacaaggccagggtgctggctgaggccatgtcccagggtgaccaactccgccacc  
atcatgatgcagaggggcaacttcaggaaccagaggaagacagtgaagtgcttcaactgtggcaagggtggggccac  
attgccaagaactgtagggccccccaggaagaagggtgctggaagtgtggcaaggaggggccaccagatgaaggac  
tgcaatgagaggcaggccaacttccctgggcaaaatctggccctcccacaagggcaggcctggcaacttccctccag  
tccaggcctgagcccacagccccctcccaggaggtccttcagggtttggggaggagaagaccacccccagccagaag  
caggagcccattgacaaggagctgtacccctggcctccctgaggtccctgtttggcaacgacccctcctcccag  
taaaataaagcccgggcagat

FIG. 12

```

1 ccattgcata cgttgatatcc atatcataat atgtacattt atattggctc atgtccaaca
61 ttaccgccat gttgacattg attattgact agttattaat agtaatcaat tacgggggtca
121 ttagttcata gcccatatat ggaggttccgc gttacataac ttacggtaaa tggcccgctt
181 ggctgaccgc ccaacgaccc ccgcccattg acgtcaataa tgacgtatgt tcccatagta
241 acgccaatag ggactttcca ttgacgtcaa tgggtggagt atttacggta aactgcccac
301 ttggcagtac atcaagtgtg tcatatgcca agtacgcccc ctattgacgt caatgacggt
361 aaatggcccc cctggcatta tgcccagtac atgaccttat gggactttcc tacttggcag
421 tacatctacg tattagtcac cgctattacc atgggtgatgc ggttttggca gtacatcaat
481 gggcggtgat agcgggttga ctcacgggga tttccaagtc tccaccccat tgacgtcaat
541 gggagtttgt tttggcacca aaatcaacgg gactttccaa aatgtcgtaa caactccgcc
601 ccattgacgc aaatgggagg taggcgtgta cgggtggagg tctatataag cagagctcgt
661 ttagtgaacc gtcagatcgc ctggagagcg catccacgct gttttgacct ccatagaaga
721 caccgggacc gatccagcct ccgcgccggg gaacgggtgca ttggaacgcg gattccccgt
781 gccaagagtg agatctacca TGGGTGCTAG GGCTTCTGTG CTGTCTGGTG GTGAGCTGGA
841 CAAGTGGGAG AAGATCAGGC TGAGGCCCTGG TGGCAAGAAG AAGTACAAGC TAAAGCACAT
901 TGTGTGGGCC TCCAGGGAGC TGGAGAGGTT TGCTGTGAAC CCTGGCCTGC TGGAGACCTC
961 TGAGGGGTGC AGGCAGATCC TGGGCCAGCT CCAGCCCTCC CTGCAAACAG GCTCTGAGGA
1021 GCTGAGGTCC CTGTACAAAC CAGTGGCTAC CCTGTACTGT GTGCACCAGA AGATTGATGT
1081 GAAGGACACC AAGGAGGCCC TGGAGAAGAT TGAGGAGGAG CAGAACAAGT CCAAGAAGAA
1141 GGCCACGACG GCTGCTGCTG GCACAGGCAA CTCCAGCCAG GTGTCCCAGA ACTACCCCAT
1201 TGTGAGAAC CTCCAGGGCC AGATGGTGCA CCAGGCCATC TCCCCCGGA CCCTGAATGC
1261 CTGGGTGAAG GTGGTGGAGG AGAAGGCCCT CTCCCCTGAG GTGATCCCCA TGTCTCTGTC
1321 CCTGTCTGAG GGTGCCACCC CCCAGGACCT GAACACCATG CTGAACACAG TGGGGGGCCA
1381 TCAGGCTGCC ATGCAGATGC TGAAGGAGAC CATCAATGAG GAGGCTGCTG AGTGGGACAG
1441 GCTGCATCCT GTGCACGCTG GCCCCATTGC CCCCAGCCAG ATGAGGGAGC CCAGGGGCTC
1501 TGACATTGCT GGCACCACCT CCACCCTCCA GGAGCAGATT GGCTGGATGA CCAACAACCC
1561 CCCCATCCCT GTGGGGGAAA TCTACAAGAG GTGGATCATC CTGGGCCCTGA ACAAGATTGT
1621 GAGGATGTAC TCCCCACCT CCATCCTGGA CATCAGGCAG GGCCCCAAGG AGCCCTTCAG
1681 GGACTATGTG GACAGGTTCT ACAAGACCCT GAGGGCTGAG CAGGCCCTCC AGGAGGTGAA
1741 GAACTGGATG ACAGAGACCC TGCTGGTGCA GAATGCCAAC CCTGACTGCA AGACCATCCT
1801 GAAGGCCCTG GGCCCTGCTG CCACCCTGGA GGAGATGATG ACAGCCTGCC AGGGGGTGGG
1861 GGGCCCTGGT CACAAGGCCA GGGTGCTGGC TGAGGCCATG TCCCAGGTGA CCAACTCCGC
1921 CACCATCATG ATGCAGAGGG GCAACTTCAG GAACCAGAGG AAGACAGTGA AGTGCTTCAA
1981 CTGTGGCAAG GTGGGCCACA TTGCCAAGAA CTGTAGGGCC CCCAGGAAGA AGGGCTGCTG
2041 GAAGTGTGGC AAGGAGGGCC ACCAGATGAA GGACTGCAAT GAGAGGCAGG CCAACTTCCT
2101 GGGCAAAATC TGGCCCTCCC ACAAGGGCAG GCCTGGCAAC TTCTCCAGT CCAGGCCTGA
2161 GCCCACAGCC CCTCCCGAGG AGTCCTTCAG GTTTGGGGAG GAGAAGACCA CCCCAGCCA
2221 GAAGCAGGAG CCCATTGACA AGGAGCTGTA CCCCCTGGCC TCCCTGAGGT CCCTGTTTGG
2281 CAACGACCCC TCCTCCAGT AAaataaagc ccgggcagat ctgatctgct gtgccttcta
2341 gttgccagcc atctgttgtt tgccctctcc ccgtgccttc cttgaccctg gaaggtgcca
2401 ctcccactgt ctttcctaa taaaatgagg aaattgcatc gcattgtctg agtaggtgtc
2461 attctattct ggggggtggg gtggggcagc acagcaaggg ggaggattgg gaagacaata
2521 gcaggcatgc tggggatgcg gtgggctcta
SEQ ID NO: 2

```

FIG. 13

1	ccattgcata	cgttgatatcc	atatcataat	atgtacattt	atattggctc	atgtccaaca
61	ttaccgccat	gttgacattg	attattgact	agttattaat	agtaatcaat	tacgggggtca
121	ttagttcata	gcccataatat	ggagttccgc	gttacataac	ttacggtaaa	tggcccgctt
181	ggctgaccgc	ccaacgaccc	ccgcccattg	acgtcaataa	tgacgtatgt	tcccatagta
241	acgccaatag	ggactttcca	ttgacgtcaa	tgggtggagt	atttacggta	aactgcccac
301	ttggcagtag	atcaagtgtg	tcatatgcc	agtacgccc	ctattgacgt	caatgacggt
361	aaatggcccc	cctggcatta	tgcccagtag	atgaccttat	gggactttcc	tacttggcag
421	tacatctacg	tattagtcac	cgctattacc	atgggtgatgc	ggttttggca	gtacatcaat
481	gggcgtggat	agcgggttga	ctcacgggga	tttccaagtc	tccaccccat	tgacgtcaat
541	gggagtttgt	tttggcacca	aaatcaacgg	gactttccaa	aatgtcgtaa	caactccgcc
601	ccattgacgc	aaatgggcgg	taggcgtgta	cggtgggagg	tctatataag	cagagctcgt
661	ttagtgaacc	gtcagatcgc	ctggagacgc	catccacgct	gttttgacct	ccatagaaga
721	caccgggacc	gatccagcct	ccgcggccgg	gaacggtgca	ttggaacgcg	gattccccgt
781	gccaagagtg	agatctaagt	aagcttcctg	CATGCTGCTG	CTGCTGCTGC	TGCTGGGCCT
841	GAGGCTACAG	CTCTCCCTGG	GCATCATCCC	AGTTGAGGAG	GAGAACCCGG	ACTTCTGGAA
901	CCGCGAGGCA	GCCGAGGCC	TGGGTGCCGC	CAAGAAGCTG	CAGCCTGCAC	AGACAGCCGC
961	CAAGAACCTC	ATCATCTTCC	TGGGCGATGG	GATGGGGGTG	TCTACGGTGA	CAGCTGCCAG
1021	GATCCTAAAA	GGGCAGAAGA	AGGACAAACT	GGGGCCTGAG	ATACCCCTGG	CCATGGACCG
1081	CTTCCCATAT	GTGGCTCTGT	CCAAGACATA	CAATGTAGAC	AAACATGTGC	CAGACAGTGG
1141	AGCCACAGCC	ACGGCCTACC	TGTGCGGGGT	CAAGGGCAAC	TTCCAGACCA	TTGGCTTGAG
1201	TGCAGCCGCC	CGCTTTAACC	AGTGCAACAC	GACACGCGGC	AACGAGGTCA	TCTCCGTGAT
1261	GAATCGGGCC	AAGAAAGCAG	GGAAGTCAGT	GGGAGTGGTA	ACCACCACAC	GAGTGCAGCA
1321	CGCCTCGCCA	GCCGGCACCT	ACGCCCACAC	GGTGAACCGC	AACTGGTACT	CGGACGCCGA
1381	CGTGCCTGCC	TCCGCCCGCC	AGGAGGGGTG	CCAGGACATC	GCTACGCAGC	TCATCTCCAA
1441	CATGGCATAT	GACGTGATCC	TAGGTGGAGG	CCGAAAAGTAC	ATGTTTCGCA	TGGGAACCCC
1501	AGACCTGAG	TACCCAGATG	ACTACAGCCA	AGGTGGGACC	AGGCTGGACG	GGAAGAATCT
1561	GGTGCAGGAA	TGGCTGGCGA	AGCGCCAGGG	TGCCCCTGAT	GTGTGGAACC	GCACTGAGCT
1621	CATGCAGGCT	TCCCTGGACC	CGTCTGTGAC	CCATCTCATG	GGTCTCTTTG	AGCCTGGAGA
1681	CATGAAATAC	GAGATCCACC	GAGACTCCAC	ACTGGACCCC	TCCCTGATGG	AGATGACAGA
1741	GGCTGCCCTG	CGCCTGCTGA	GCAGGAACCC	CCGCGGCTTC	TTCTCTTTCG	TGGAGGGTGG
1801	TCGCATCGAC	CATGGTCATC	ATGAAAGCAG	GGCTTACCGG	GCACTGACTG	AGACGATCAT
1861	GTTCGACGAC	GCCATTGAGA	GGGCGGGCCA	GCTCACCAGC	GAGGAGGACA	CGCTGAGCCT
1921	CGTCACTGCC	GACCACTCCC	ACGTCTTCTC	CTTCGGAGGC	TACCCCTTGC	GAGGGAGCTC
1981	CATCTTCGGG	CTGGCCCCCTG	GCAAGGCCCG	GGACAGGAAG	GCCTACACGG	TCCTCCTATA
2041	CGGAAACGGT	CCAGGCTATG	TGCTCAAGGA	CGGCGCCCCG	CCGGATGTTA	CCGAGAGCGA
2101	GAGCGGGAGC	CCCGAGTATC	GGCAGCAGTC	AGCAGTGCCC	CTGGACGAAG	AGACCCACGC
2161	AGGCGAGGAC	GTGGCGGTGT	TGCGCGCGGG	CCCGCAGGCG	CACCTGGTTC	ACGGCGTGCA
2221	GGAGCAGACC	TTCATAGCGC	ACGTCATGGC	CTTCGCCGCC	TGCCCTGGAGC	CCTACACCGC
2281	CTGCGACCTG	GCGCCCCCGG	CCGGCACCAC	CGACGCCCGG	CACCCGGGTT	AAcccggtgt
2341	ccccgcgttg	cttcctctgc	tggccgggac	atcaggtggc	ccccgctgaa	ttggaatcga
2401	tcagaattca	gtcgacgata	tctgatcagc	atctgatctg	ctgtgccttc	tagttgccag
2461	ccatctgttg	tttgcccttc	ccccgtgcct	tccttgacct	tggagaggtag	cactcccact
2521	gtccttttct	aataaaatga	ggaaattgca	tgcgattgtc	tgagtaggtg	tcattctatt
2581	ctgggggggtg	gggtgggggca	gcacagcaag	ggggaggatt	gggaagacaa	tagcaggcat
2641	gctgggggatg	cggtgggctc	ta			

FIG. 14

1	catcatcaat	aatataccccc	acaaagtaaa	caaaagttaa	tatgcaaagt	aggtttttaa
61	tttagggcgg	ggctactgct	gattggccga	gaaacgttga	tgcaaagtac	gtcacgacgc
121	acggctaacg	gtcgcccgcg	aggcgtggcc	tagcccgga	gcaagtcgcg	gggctgatga
181	cgtataaaaa	agcggacttt	aaacccggaa	acggccgatt	ttcccgcggc	cacgcccggg
241	tatgaggtaa	ttctgggcgg	atgcaagtga	aattaggtca	ttttggcgcg	aaaactgaat
301	gaggaagtga	aaagtgaaaa	ataccgggtcc	cgcccagggc	ggaatatatta	ccgagggccg
361	agagactttg	accgattacg	tgtgggtttc	gattgcgggtg	ttttttcgcg	aatttccgcg
421	tccgtgtcaa	agtccgggtg	ttatgtcaca	gatcagctga	tccacagggg	atttaaacca
481	gtcgagcccc	tcaagaggcc	actcttgagt	gccagcgagt	agagattttct	ctgagctccg
541	ctcccagagt	gtgagaaaaa	tgagacacct	gcgcctcctg	cctggaactg	tgcccttgga
601	catggccgca	ttattgctgg	atgactttgt	gagtacagta	ttggaggatg	aactgcaacc
661	aactccgttc	gagctgggac	ccacacttca	ggacctctat	gattttggagg	tagatgcccc
721	ggaggacgac	ccgaacgaag	atgctgtgaa	tttaatatatt	ccagaatctc	tgattcttca
781	ggctgacata	gccagcgaag	ctctacttac	tccacttcat	actccaactc	tgtcaccctat
841	acctgaattg	gaagaggagg	acgagttaga	cctccgggtg	tatgaggaag	gttttcctcc
901	cagcgattca	gaggacgaac	aggggtgagca	gagcatggct	ctaactctcag	actatgcttg
961	tgtgggtgtg	gaagagcatt	ttgtgttgga	caatcctgag	gtgcccgggc	aaggctgtaa
1021	atcctgccag	taccaccggg	ataagaccgg	agacacgaac	gcctcctgtg	ctctgtgtta
1081	catgaaaaag	aacttcagct	ttatttacag	taagtggagt	gaatgtgaga	atggtgtagt
1141	gcttaagaca	taactgggtg	atgcttcaac	agctgtgcta	agtgtggttt	atttgttttc
1201	taggtccggt	gtcagaggat	ggtcatcacc	ctcagaagaa	gaccacccgt	gtccccctga
1261	tctgtcaggc	gaaacgcccc	tgcaagtgca	cagaccacc	ccagtcagac	ccagtggcga
1321	gaggcgagca	gctgttgaaa	aaattgagga	cttgttacat	gacatgggtg	gggatgaacc
1381	tttggacctg	agcttgaaac	gtcccaggaa	actaggcgca	gctgcgctta	gtcatgtgta
1441	aataaagttg	tacaataaaa	attatatgtg	acgcatgcaa	gggtgtggtt	atgactcatg
1501	ggcggggcct	agttctatat	aagtggcaac	acctgggcac	tggagcacag	accttcaggg
1561	agttcctgat	ggatgtgtgg	actatccttg	cagactttag	caagacacgc	cggcttgtag
1621	aggatagtcc	agacgggtgc	tccgggttct	ggagacactg	gtttggaact	cctctatctc
1681	gcctggtgta	cacagttaaa	aaggattata	acgaggaatt	tgaaaatctt	tttgctgatt
1741	gctctggcct	gctagattct	ctgaattctcg	gccaccagtc	ccttttccag	gaaagggtag
1801	tccacagcct	tgatttttcc	agcccagggc	gcactacagc	cgggggtgct	tttggtggtt
1861	ttctggttga	caaatggagc	cagaacaccc	aactgagcag	gggctacatt	ctggacttcg
1921	cagccatgca	cctgtggagg	gcatgggtca	ggcagcgggg	acagagaatc	ttgaactact
1981	ggcttctaca	gccagcagct	ccgggtcttc	ttcgtctaca	cagacaaaca	tccatgttgg
2041	aggaagaaat	gaggcaggcc	atggacgaga	acccgaggag	cggctctggac	cctccgtcgg
2101	aagaggagtt	ggattgaatc	aggtatccag	cctgtacca	gagcttagca	aggtgctgac
2161	atccatggcc	aggggagtg	agagggagag	gagcgatggg	ggcaataaccg	ggtgatgac
2221	cgagctgacg	gccagtctga	tgaatcgcaa	gcgcccagag	cgcttacct	ggtacgagct
2281	acagcaggag	tcaggggatg	agttgggcct	gatgcaggat	aaatatggcc	tgagcagat
2341	aaaaacccat	tggttgaacc	cagatgagga	ttgggaggag	gctattaaga	agtatgccaa
2401	gatagccctg	cgcccagatt	gcaagtacat	agtgaccaag	accgtgaata	tcagacatgc
2461	tgctacatct	cggggaacgg	ggcagaggtg	gtcattgata	cctggacaa	ggcgccttt
2521	aggtgttgca	tgatgggaat	gagagccgga	gtgatgaata	tgaattccat	gatctttatg
2581	aacatgaagt	tcaatggaga	gaagtttaat	ggggtgctgt	tcattggcaa	cagccacatg
2641	accctgcatg	gctgcgactt	tttcggcttt	aacaatatgt	gcgcagaggt	ctggggcgct
2701	tccaagatca	ggggatgtaa	gttttatggc	tgctggatgg	gcgtgggtcgg	aagacccaag
2761	agcgagatgt	ctgtgaagca	gtgtgtgttt	gagaaatgct	acctgggagt	ctctaccgag
2821	ggcaatgcta	gagtgaagca	ctgctcttcc	ctggagacgg	gctgcttctg	cctggtgaag
2881	ggcacagcct	ctctgaagca	taatattggtg	aagggtgca	cggatgagcg	catgtacaac
2941	atgctgactg	cgactcgggg	gtctgtcata	tcctgaagaa	catccatgtg	acctccacc
3001	ccagaaagaa	gtggccagtg	tttgagaata	acatgctgat	caagtgccac	atgcacctgg
3061	gcgccagaag	gggcaccttc	cagccgtacc	agtgcaactt	tagccagacc	aagctgctgt
3121	tggaagaaga	tgcccttctcc	aggggtgaacc	tgaacggcat	ctttgacatg	gatgtctcgg
3181	tgtacaagat	cctgagatac	gatgagacca	agtcagggt	gcgcgcttg	gatgctggg
3241	gcagacacac	caggatgcag	ccagtggccc	tgatgtgac	cgaggagctg	agaccagacc
3301	acctggtgat	ggcctgtacc	gggaccgagt	tcagctccag	tggggaggac	acagattaga
3361	ggtaggtttg	agtagtgggc	gtggctaagg	tgactataaa	ggcgggtgtc	ttacgagggt
3421	ctttttgctt	ttctgcagac	atcatgaacg	ggaccggcgg	ggccttcgaa	ggggggcttt
3481	ttagccttta	tttgacaacc	cgctgcccag	gatggggccg	agttcgtcag	aatgtgatgg
3541	gatcgacggg	ggacggggcg	ccagtgtctc	cagcaaattc	ctcgaccatg	acatgacgca
3601	ccgtggggaa	ctcgtcgctt	gacagcaccg	ccgcagccgc	ggcagccgca	gccgccatga
3661	cagcgacgag	actggcctcg	agctacatgc	ccagcagcag	cagtagcccc	tctgtgcca

FIG. 15A-1



3721	gttccatcat	cgccgaggag	aactgctggc	cctgctggcc	gagctggaag	ccctgagccg
3781	ccagctggcc	gccctgaccc	agcaggtgtc	cgagctccgc	gaacagcagc	agcaaaataa
3841	atgattcaat	aaacacatat	tctgattcaa	acagcaaagc	atctttatta	tttatttttt
3901	cgcgcgcggt	agggcctggt	ccacctctcc	cgatcattga	gagtgcgggtg	gattttttcc
3961	aagacccggt	agaggtggga	ttggatgttg	aggtagatgg	gcatgagccc	gtcccggggg
4021	tggaggtagc	accactgcat	ggcctcgtgc	tctggggctg	tgttgtagat	gatccagtca
4081	tagcaggggc	gctgggcgtg	gtgctggatg	atgtccttga	ggaggagact	gatggccacg
4141	gggagccct	tgggttaggt	gttggcaaag	cggttgagct	gggagggatg	catgcggggg
4201	gagatgatgt	gcagtttggc	ctggatcttg	aggttggcga	tgttgccacc	cagatccgcg
4261	cgggggttca	tgttgtgcag	gaccaccagg	acgggtgtagc	ccgtgcactt	ggggaactta
4321	tcatgcaact	tggaagggaa	tgcgtggaag	aatttggaga	cgcccttgtg	cccgccagg
4381	ttttccatgc	actcatccat	gatgatggcg	atggggccgt	gggctgcggc	tttggcaaag
4441	acgtttctgg	ggtcagagac	atcataatta	tgctcctggg	tgagatcatc	ataagacatt
4501	ttaattgaatt	ttgggcggag	ggtgccagat	tgggggacga	tggtttccct	cgggcccccg
4561	ggcgaagttc	ccctcgcaga	tctgcatctc	ccaggctttc	atctcggagg	gggggatcat
4621	gtccacctgc	ggggcgatga	aaaaaacggt	ttccggggcg	ggggtgatga	gctgcgagga
4681	gagcaggttt	ctcaacagct	gggacttgcc	gcacccgggtc	gggccgtaga	tgaccccgat
4741	gacgggttgc	aggtggtagt	tcaaggacat	gcagctgccg	tcgtcccggg	ggaggggggc
4801	cacctcgttg	agcatgtctc	taacttggag	gttttcccgg	acgagctcgc	cgagaggcgc
4861	gtccccgccc	agcgagagga	gctcttgtag	ggaagcaaag	tttttcaggg	gcttgagtc
4921	gtcggccatg	ggcatcttgg	cgagggtctg	cgagaggagt	tcgagacgtc	ccagagctcg
4981	gtgacgtgct	ctacggcatc	tcgatccagc	agacttcctc	gtttcggggg	ttgggacgac
5041	tgcgactgta	gggcacgaga	cgatgggcgt	ccagcgcggc	cagcgtcatg	tccttcagg
5101	gtctcagggg	ccgcgtgagg	gtggctctcg	tcacgggtga	ggggtggggc	cctggctggg
5161	cgcttgcaag	ggtgcgcttg	agactcatcc	tgctgggtgct	gaaacgggca	gggtcttcgc
5221	cctgcgcgtc	ggcgagatag	cagttgacca	tgagctcgta	gttgaggggc	tcggcggcgt
5281	ggcccttggc	gcgagccttg	cccttggaag	agcgtccgca	ggcgggacag	aggagggatt
5341	gcagggcgta	gagcttgggc	gcaagaaaga	ccgactcggt	agcaaaagcg	tccgctccgc
5401	agtgggcgca	gacggtctcg	cactcgacga	gccaggtgag	ctcgggctgc	tcggggtcaa
5461	aaaccagttt	tccccgcttc	tttttgatgc	gcttcttacc	tcgcgtctcc	atgagtctgt
5521	gtccgcgctc	ggtgacaaac	aggctgtcgg	tgctcccgtg	gacgagcttg	attggcctgt
5581	cctgcagggg	cgtcccgcgg	tcctcctcgt	agagaaactc	ggaccactct	gagacaaagg
5641	cgcgcgctca	cgccaagaca	aaggaggcca	cgtgcgaggg	gtagcggctc	ttgtccacca
5701	gggggtccac	cttttccacc	gtgtgcagac	acatgtcccc	ttcctccgca	tccaagaagg
5761	tgattggctt	gtaggtgtag	gccacgtgac	caggggtccc	cgacgggggg	gtataaaagg
5821	gggcgggtct	gtgctcgtcc	tcactctctt	ccgcgtcgct	gtccacgagc	gccagctgtt
5881	gggtaggta	ttccctctcg	agagcgggca	tgacctcggc	actcaggttg	tcagtttcta
5941	gaaacgagga	ggatttgatg	ttggcttgcc	ctgccgcaat	gcttttttagg	agactttcat
6001	ccatctgggtc	agaaaagact	atttttttat	tgtcaagctt	ggtggcaaag	gagccataga
6061	gggcgttgga	gagaagcttg	gcgatggatc	tcatgggtctg	atttttgtca	cggtcggcgc
6121	gtcctcttgg	cgcgatgttg	agctggacat	attcgcgcg	gacacacttc	cattcgggaa
6181	gacaggttgg	gcgctcgtcg	ggcacgatcc	tgacgcgcca	gccgcggtta	tgacaggtga
6241	ccaggctccac	gctgggtggc	acctgcgcgc	gcaggggctc	gttagtccag	cagagtctgc
6301	cgcccttgcg	cgagcagaac	gggggcagca	catcaagcag	atgctcgtca	gggggggtccg
6361	catcgatggt	gaagatgccg	ggacagagtt	tcttgtcaaa	atagtctatt	tttgaggatg
6421	catcatccaa	ggccatctgc	cactcgcggg	cggccatttg	tcgctcgtag	gggttgaggg
6481	gcggacccca	cggcatggga	tgcttgaggg	cggaggcgta	catgccgcaa	atgtcgtaaa
6541	catagatggg	ctccgagaag	atgccgatgt	tgggtgggata	acagcgcccc	cgcggatg
6601	tggcgcgcac	gtattcatac	aactcgtgcg	agggggccaag	aaggccgggg	ccgaaattgg
6661	tgcgctgggg	ctgctcggcg	cggaaaacaa	tctggcgaaa	gatggcgtgc	gagttggagg
6721	agatggtggg	ccgttggaag	atgttaaagt	gggcgtgggg	caagcggacc	gagtcgcgga
6781	tgaagtgcgc	gtaggagtct	tgcagcttgg	cgacgaactc	ggcgggtgacg	agaacgtcca
6841	tggcgcgagta	gtccagcggt	tcgcggtatga	tgtcataacc	cgcctctctc	ttcttctccc
6901	acagctcgcg	gttgagggcg	tattcctcgt	catccttcca	gtactcccgg	agcgggaatc
6961	ctcgatcgtc	cgcacggtaa	gagcccagca	tgtagaaatg	gttcacggcc	ttgtagggac
7021	agcagccctt	ctccacgggg	agggcgtaag	cttgtgcggc	cttgccggagc	gaggtgtgcg
7081	tcagggcgaa	ggtgtccctg	accatgactt	tcaagaactg	gtacttgaaa	tccgagtcgt
7141	cgcagccgcc	gtgctcccat	agctcgaat	cggtgcgctt	cttcgagagg	gggttaggca
7201	gagcgaaaagt	gacgtcattg	aagaaatct	tgctgtctcg	cggcatgaaa	ttgcgggtga
7261	tgcgaaaagg	gcccgggacg	gaggctcggt	tgttgatgac	ctgggcggcg	aggacgatct
7321	cgtcgaagcc	gttgatgttg	tgcccagcga	tgtagagttc	catgaatcgc	gggcggcctt
7381	tgatgtgcgg	cagctttttg	agctcctcgt	aggtagggtc	ctcggggcat	tgaggccgt

FIG. 15A-2

7441	gctgctcgag	cgcccatctc	tggagatgtg	ggttggtctg	catgaaggaa	gcccagagct
7501	cgcgggccat	gaggggtctg	agctcgctcg	gaaagaggcg	gaactgctgg	cccacggcca
7561	tcttttcggg	tgtgacgcag	tagaagggtg	gggggtccc	ctcccagcga	tcccagcgta
7621	agcgcgcggc	tagatcgcg	gcaagggcga	ccagctctgg	gtcccccag	aatttcatga
7681	ccagcatgaa	ggggacgagc	tgcttgccga	aggaccccat	ccaggtgtag	gtttctacat
7741	cgtaggtgac	aaagagccgc	tccgtgcgag	gatgagagcc	gattgggaag	aactggattt
7801	cctgccacca	gttggacgag	tggctgttga	tgtgatgaaa	gtagaaatcc	cgccggcgaa
7861	ccgagcactc	gtgctgatgc	ttgtaaaagc	gtccgcagta	ctcgacgcgc	tgcacgggct
7921	gtacctcatc	cacgagatac	acagcgcgtc	ccttgaggag	gaacttcagg	agtggcgggc
7981	ctggctggtg	gttttcatgt	tcgcctgcgt	gggactcacc	ctggggctcc	tcgaggacgg
8041	agaggctgac	gagcccgcgc	gggagccagg	tccagatctc	ggcgcgggcg	gggaggagag
8101	cgaagacgag	ggcgcgagtc	tgggagctgt	ccatggtgtc	gcgagatcc	aggccggggg
8161	gcagggttct	gaggttgacc	tcgtagaggg	gggtgagggc	gtgcttgaga	gtgcttggtt
8221	acttgatttc	tacgggtgag	ttggtggccg	ttgccacgca	ttgcatgagc	ccgtagctgc
8281	gcgggggccac	gaccgtgccg	cggtgcgctt	ttagaagcgg	tgctcgggac	gcgtcccggg
8341	cggcagcggc	ggttccggcc	ccgcgggcag	gggcggcaga	ggcacgtcgg	cgtggcgctc
8401	gggcaggtcc	cggtgttgcg	ccctgagagc	gctggcgctg	gcgacgacgc	ggcggttgac
8461	atcctggatc	tgccgcctct	gcgtgaagac	cactggcccc	gtgactttga	acctgaaaga
8521	cagttcaaca	gaatcaatct	cggcgtcatt	gacggcgggc	gacgcagga	tgctttgcac
8581	gtcgcccgag	ttgtcctggg	aggcgatctc	ggacatgaac	tgctcgatct	cctcctcctg
8641	gagatcgccg	cgacccgcgc	gctccacggg	ggcgcgaggg	tcattcgaga	tgcgacccat
8701	gagctgcgag	aaggcgccca	ggcgctcttc	gttccagacg	cggtgtaga	ccacgtcccc
8761	gtcgcgctcg	cgcgcgcgca	tgaccacctg	cgcgaggttg	agctccacgt	gccgcgcgaa
8821	gacggcgtag	ttgcgcaggg	gctggaagag	gtagttgagg	gtggtggcga	tgtgctcggt
8881	gacgaagaag	tacatgatcc	agcggcgcag	gggcatctcg	ctgatgtcgc	cgtaggcctc
8941	cagcctttcc	atggcctcgt	agaaatccac	ggcgaagttg	aaaaactggg	cgttgcgggc
9001	cgagaccgtg	agctcgtctt	ccaggagcct	gatgagctcg	gcatggtggg	cgcgcacctc
9061	gcgctcgaaa	tccccggggg	cctcgtcctc	ttcctcttct	tccatgacaa	cctcttctat
9121	ttcttctctt	gggggcggtg	gtggtggcgg	ggcccgcacg	cgacggcgac	gcaccgggag
9181	acggctcgacg	aagcgctcga	tcacttcccc	gcgggcgcca	cgcattggtt	cggtgacggc
9241	gcgaccccg	tcgcgaggac	gcagcgtgaa	gacgcgcgcg	gtcatctccc	gtcaatgggg
9301	cggggtcccc	ttgggcagcg	agagggcgct	gacgatgcac	cttatcaatt	gcggtgtagg
9361	ggacgtgagc	gcgtcgagat	cgaccggatc	ggagaatctt	tcgaggaaag	cgtctagcca
9421	atcgacgtcg	caaggtaagc	tcaaacacgt	agcagccctg	tggacgctgt	tagaattgcg
9481	gttgctaattg	atgtaattga	agtaggcgtt	tttgaggcgg	cggatggtgg	cgaggaggac
9541	caggtccttg	ggtcccgcct	gctggatgcg	gagccgctcg	gccatgcccc	aggcctggcc
9601	ctgacaccgg	cttaggttct	tgtagtgtgc	atgcatgagc	ctctcgatgt	ctcactggc
9661	ggaggcgagg	tcttccatgc	gggtgacccc	gacgccccct	agcggtgca	cgagcgccag
9721	gtcgcgacg	acgcgctcgg	cgaggatggc	ctgttgacacg	cggttgaggg	tgtcctggaa
9781	gtcgctccatg	tcgacgaagc	ggtggttaggc	ccctgtgttg	atggtgtaag	tgcagttggc
9841	catgagcgac	cagttgacgg	tctgcaggcc	gggctgcacg	acctcggagt	acctgagccg
9901	cgagaaggcg	cgcgagtcga	agacgtagtc	gttgacagtg	cgcacaaggt	actgtatccc
9961	cgtaggaag	tgcggcgggc	gtggcggtga	gagcgccag	cgctgggtgg	ccggcgcgcc
10021	cgggggccagg	tcctcgagca	tgaggcggtg	gtagccgtag	aggtagcggg	acatccaggt
10081	gatgccggca	gcggtggtgg	aggcgcgcg	gaactcgcg	acgcggttcc	agatgttgcg
10141	cagcggcagg	aaatagtcca	tggtcggcac	ggtctggccg	gtgagacgcg	cgcagtcatt
10201	gacgctctag	aggcaaaaac	gaaagcggtt	gagcgggctc	ttcctccgta	gcctggcgga
10261	acgcaaacgg	gttaggcgcg	gcgtgtaccc	cggttcgagt	cccctcgaat	caggctggag
10321	ccgcgactaa	cgtggtattg	gcactcccgt	ctcgacccga	gcccgatagc	cgccaggata
10381	cgcggaaga	gccctttttg	ccggccgarg	ggagtcgcta	gacttgaaag	cgccgaaaaa
10441	ccccgccggg	tagtggctcg	cgcccgtagt	ctggagaagc	atcgccaggg	ttgagtcgcg
10501	gcagaaccgg	gttcgcggac	ggcccgggcg	agcgggactt	ggtcaccctg	ccgatttaaa
10561	gacccacagc	cagccgactt	ctccagttac	gggagcgagc	cccctttttt	ctttttgcca
10621	gatgatcccc	gtcctgcgcc	aaatgcgctc	cacccccccg	gcgaccacgg	cgcacggcg
10681	cgtagcaggg	gccggcgcta	gccagccaca	gccacagaca	gagatggact	tgggaagagg
10741	cgaagggtcg	gcgagactgg	gggcgccttc	cccgagcgca	caccccccg	tgcagctgca
10801	gaaggacgtg	cgcccgcggt	acgtgcctgc	gcaaaaacct	ttcagggacc	gcagcgggga
10861	ggagcccgag	gagatgcgcg	actgccggtt	tcgggcgggc	agggagctgc	gcgagggcct
10921	ggaccgcccag	cgcggtgctgc	cgcgagagga	tttcgagccg	aacgagcaga	cggggacacg
10981	ccccgcgcgc	gcgcacgtgg	cgccggccaa	cctggtgacg	gcctacagag	agacgggtga
11041	gcaggagcgc	aacttccaaa	agagtttcaa	caaccatgtg	cgcaccctga	tcgcgcgcga
11101	ggaggtggcc	ctgggcctga	tgcacctgtg	ggacctggcg	gaggccatcg	tgcagaacct

FIG. 15A-3

11161	ggacagcaag	cctctgacgg	cgcagctgtt	cctgggtggt	cagcacagca	gggacaacga
11221	ggcggttcagg	gaggcgctgc	taaacatcgc	cgagcccag	ggtcgctggc	tgctggagct
11281	gatcaacatc	ttgcagagca	tcgtagtcca	ggagcgcagc	ctgagcttgg	ccgagaaggt
11341	ggcggaatc	aactactcgg	tgcttagcct	gggcaagt	tacgcgcgca	agatttacia
11401	gacgccgtac	gtgcccatag	acaaggaggt	gaagatagac	agcttttaca	tgccgatggc
11461	gctcaagggtg	ctgacgctga	gcgacgacct	ggcggtgtac	cgcaacgacc	gcattccaca
11521	ggcggtgagc	gcgagccggc	ggcgcgagct	gagcgaccgc	gagctgatgc	tgagcctgcg
11581	ccgggcgctg	gtagggggcg	ccgcgcggcg	cgaggagtcy	tacttcgaca	tgggggcgga
11641	cctgcattgg	cagccgagcc	ggcgcgctt	ggaggccgcc	tacgggtccag	aggacttggg
11701	tgaggaagag	gaagaggagg	aggatgcacc	cgctgcgggg	tactgacgcc	tccgtgatgt
11761	gttttttagat	gcagcaagcc	ccggaccccg	ccataagggc	ggcgctgcaa	agccagccgt
11821	ccgggtctagc	atcggaagac	tgggaggctg	cgatgcaacg	catcatggcc	ctgacgacc
11881	gcaaccccg	gtcctttaga	caacagccgc	aggccaacag	actctcgccg	attctggagg
11941	cggtgggtccc	ttctcggaac	aacccacgc	acgagaaggt	gctggcgatc	gtgaacgcgc
12001	tgccggagaa	caaggccatc	cgtcccgcag	aggccgggct	agtgtacaac	gccctgctgg
12061	agcgcgtagg	ccgctacaac	agcacaacag	tgacgtccaa	cctggaccgg	ctggtgacgg
12121	acgtgcgcga	agccgtggcg	cagcgcgagc	ggttcaagaa	cgagggcctg	ggctcgctgg
12181	tgccgctgaa	cgccttctctg	gcgacgcagc	cgccgaacgt	ggcgcgccgg	caggatgatt
12241	acaccaactt	tatcagcgcg	ctgcagctga	tggtgaccga	ggcgcccgag	acggaggtgt
12301	acacagtcggg	cccgactac	tttttccaaa	ctagcagaca	gggcctgcaa	acggtgaacc
12361	tgagccaggc	tttcaagaac	ctgcgcgggc	tggtggggcg	gcaggcgccc	tggggcgacc
12421	ggtcgacggg	gagcagcttg	ctgacgccc	actcgccgct	gctgctgctg	ctgatcgccg
12481	ccttcaccga	cagtggcagc	gtaaaccgca	actcgtacct	gggtcacctg	ctaaccgtgt
12541	accgcgaggc	cataggccag	gcgaggtgg	acgagcagac	cttcaggag	ataactagcg
12601	tgagccgcgc	gctggggcag	aacgacaccg	acagtctgag	ggccaccctg	aacttcttgc
12661	tgaccaatag	acagcagaag	atcccgccgc	agtacgcgct	gtccggccgag	gaggagcgca
12721	tcctgagata	tgtgcagcag	agcgtagggc	ttttctctgat	gcaggagggg	gccactccca
12781	gcgcgcgcgt	ggacatgacc	gcgcgcaaca	tggaacctag	catgtacgcc	gccaaccggc
12841	cgttttatcaa	taagctaattg	gactacctgc	atcgccggcg	gtccatgaac	tcggactact
12901	ttaccaatgc	cattttgaac	ccgcactggc	ttccgcgcgc	ggggttctat	acgggcgagt
12961	acgacatgcc	cgaccccaac	gacgggtttt	tggtggacga	cggtggacga	cggtgtttt
13021	caccgacctt	gcaaaagcgc	caggaggcgg	tgccgacgcc	cgcgagcgag	ggcgcggttg
13081	gtcgagagccc	ctttcctagc	ttaggaggtt	tgcatagctt	gccgggctct	gtgaacagcg
13141	gcagggtgag	ccggccgcgc	ttgctggggc	aggacgagta	cctgaacgac	tcgctgctgc
13201	agccgccgcg	ggtcaagaac	gccatggcca	ataacgggat	agagagtctg	gtggacaaac
13261	tgaaccgctg	gaagacctac	gctcaggacc	ataggagacc	tgcccccgcg	ccgcggcgac
13321	agcggccagc	ccggcagcgg	ggcctgggtg	gggacgacga	ggactcgccg	cagcatagca
13381	gcgtgttgga	cttggggcggg	agcgggtggg	tcaacccgat	atcgcgcatc	ctgcagccca
13441	aactggggcg	acggatgttt	tgaatgcaaa	ataaaactca	ccaaggccat	agcgtgcgtt
13501	ctcttccttg	ttagagatga	ggcgtgcggg	gggtgtcttc	tctcctctc	cctcgtacga
13561	gagcgtgatg	gcgagggcga	ccctggagg	tcggtttgtg	cctccgcggg	atatggctcc
13621	tacggagggg	agaaacagca	ttcgttactc	ggagctggct	ccgtgttagc	acaccactcg
13681	cgtgtacttg	gtggacaaca	atgcggcgga	catcgcttcc	ctgaactatc	aaaacgacca
13741	cagcaacttc	ctgaccacgg	tggtgcagaa	caacgatttc	acccccgcgc	aggctagcac
13801	gcagacgata	aattttgacg	agcggtcgcg	gtggggcggt	gatctgaaga	ccattctgca
13861	caccaacatg	cccaatgtga	acgagtacat	gttcaccagc	aagtttaagg	cgccgggtgat
13921	ggtggctaga	aaacacccac	agggggtaga	agcaacagat	ttaagcaagg	atatcttaga
13981	gtatgagtgg	tttgagttaa	ccctgcccga	gggcaacttt	tccgagacca	tgaccataga
14041	cctgatgaac	aacgccatct	tggaaaacta	cttgcaagt	gggcggcaaa	atggcggtgt
14101	ggagagcgat	attggagtca	agtttgacag	cagaaatttc	aagctgggct	gggacctgtg
14161	gaccaagctg	gtgatgccag	gggtctacac	ctacgaggcc	tttcacccgg	acgtggtgct
14221	gctgccgggc	tgccgggtgg	acttcacaga	gagccgcctg	agcaacctcc	tgggcattcg
14281	caagaagcaa	cctttccaag	agggcttcag	aatcatgtat	gaggatctag	aggggggcaa
14341	catcccgcc	ctgctggatg	tgcccaagta	cttggaagc	aagaagaagt	tagaggaggc
14401	attggagaat	gctgctaaag	ctaattggct	tgcaagagga	gacagtagcg	tctcaagaga
14461	ggttgaaaag	gcagctgaaa	aagaacttgt	tattgagccc	atcaagcaag	atgataccaa
14521	gagaagttac	aacctcatcg	agggaaacct	ggacacgctg	taccgcagct	ggtacctgtc
14581	ctatacctac	cgggaccctg	agaacggggg	gcagtcgtgg	acgctgctca	ccaccccgga
14641	cgctacctgc	ggcgccgagc	aagtcctactg	gtcgctgcgc	gacctcatgc	aagaccccg
14701	caccttcctg	tctacccagc	actcagcaaa	ctaccccgctg	gtcgccgcgc	agctcatgcc
14761	cttccgcgcc	aagagctttt	acaacgacct	cgcgctctac	tcccagctca	tccgcagcta
14821	cacctccctc	accacgtct	tcaaccgctt	ccccgacaac	cagatcctct	gccgtccgcc

FIG. 15A-4

14881	cgcgcccacc	atcaccaccg	tcagtgaaaa	cgtgcctgct	ctcacagatc	acggggacgct
14941	accgctgcgc	agcagtatcc	gcgagtgcca	gcgagtgacc	gtcactgacg	cccgtcgccg
15001	cacctgtccc	tacgtctaca	agggcctggg	catagtgcgc	ccgcgtgtgc	tttccagtcg
15061	caccttctaa	aaaatgtcta	ttctcatctc	gccagcaat	aacaccggct	ggggtattac
15121	taggcccagc	agcatgtacg	gaggagccaa	gaaacgtccc	agcagcacc	cgtccgcgtc
15181	cgcggccact	tccgcgctcc	gtggggcgct	tacaagcgcg	ggcggactgc	caccgccgcc
15241	gccgtgcgca	ccaccgtcga	cgacgtcatc	gactcgggtg	tcgccgacgc	gcgcaactat
15301	actcccgcgc	cttcgaccgt	ggacgcggtt	cattgacagc	gtgggtggcg	cgcggcgccg
15361	atatgcgaga	cgcaagagcc	ggcgggcgga	cggatcgccc	aggcgccatt	cggagcacgc
15421	ccgccatggg	gcgcgcgccg	agctctgctg	cgccgcgcca	gacgcacggg	ccgccggggc
15481	atgatgcgag	ccgcgcgcgc	cgccgccact	gcaccccccg	caggcaggac	tcgcagacga
15541	gcggccgccc	ccgcgcgcgc	ggccatctct	agcatgacca	gacccaggcg	cggaaacgtg
15601	tactgggtgc	gcgactccgt	cacgggctgt	cgcgtgcccg	tgcgcaaccg	tcctcctcgt
15661	cccgatctta	atgcttgtgt	ctcccccg	aagcgacgat	gtcaaacgcg	atctacaaga
15721	gagatgctcc	aggctcgtcg	cccggagatt	tacggaccac	cccaggcgga	ccagaaaccc
15781	cgcaaaatca	agcgggttaa	aaaaaaggat	gaggtggacg	agggggcagt	agagtttgtg
15841	cgcgagttcg	ctccgcggcg	gcgcgtaaat	tggaaagggc	gcaggtgcac	gcgtgttgcg
15901	gcccggcacg	gcggtgggtg	tcacgcccgc	cgagcgggtc	tcggtcagga	gcaagcgtag
15961	ctatgacgag	gtgtacggcg	acgacgacat	cctggaccag	gcggcagagc	ggcgggcgga
16021	gtttgcctac	gggaagcggg	cgcgcgaaga	ggagctgata	tcgctgccgc	tggacgagag
16081	caatcccacg	ccgagcctga	agcccgtgac	ctgcagcagg	tgctgcccc	ggcgggtgctg
16141	ctgccgagcc	gcgggatcaa	gcgcgagggc	gagaacatgt	acccgaccat	gcagatcatg
16201	gtgcccgaag	gccggcgcg	ggaggaagtg	ctggacaccg	tgaaaatgga	tgtggagccc
16261	gaggtcaagg	tgcgccccat	caagcaggtg	gcgcggggcc	tgggcgtgca	gaccgtggac
16321	attcagatcc	ccaccgacat	ggatgtcgac	aaaaaacctt	cgaccagcat	cgaggtgcag
16381	accgacccct	ggctcccagc	ctccaccgct	accgcttcca	cttctaccgt	cgccacggtc
16441	accgagcctc	ccaggaggcg	aagatggggc	cccgccaaac	ggctgatgcc	caactacgtg
16501	ttgcatcctt	ccattatccc	gacgcggggc	taccgcggca	cccggtaact	cgccagccgc
16561	aggcgcccag	ccagcaaacc	ccgcgcgcgc	accgccaccc	gccgcctctt	gccccccgcc
16621	cgcgtgcgcc	gcgtaaccaa	cgcgcggggg	ccgctcgtct	gttctgccc	ccgtgcgcta
16681	ccaccccagc	atcctttaat	ccgtgtgctg	tgatactgtt	gcagagagat	gcaggtcact
16741	tgccgcctgc	gcatccccgt	tccgaattac	cgaggaagat	cccgcgcgag	gagaggcatg
16801	gcaggcagcg	gcctgaaccg	ccgcgcggcg	cgggccatgc	gcaggcgcc	gagtgccggc
16861	tttctgcccg	cgctcatccc	cataatcgcg	gcggccatcg	gcacgatccc	gggcatagct
16921	tccgttgccg	tgacggcgct	gcagcgccgt	tgatgtgcga	ataaagcctc	tttagactct
16981	gacacacctg	gtcctgtata	tttttagaat	ggaagacatc	aattttgcgt	ccctggctcc
17041	gcggcagggc	acgcggccgt	tcattggcac	ctggaacgag	atcggcacca	gccagctgaa
17101	cggggggcgcc	ttcaattgga	gcagtgtctg	gagcgggctt	aaaaatttcg	gctcgacgct
17161	ccggacctat	gggaacaagg	cctggaatag	tagcacgggg	cagttgttga	gggaaaagct
17221	caaagaccag	aacttccagc	agaaggtggt	ggacggcctg	gcctcgggca	ttaacggggg
17281	ggtggacatc	gcgaaccagg	cagtgcagcg	cgagataaac	agccgtctgg	accgcgggcc
17341	gccacgggtg	gtggagatgg	aagatgcac	tcttcgcgcg	ccgaagggcg	agaagcgcc
17401	gcggccagat	gcggaggaga	cagctctgca	gggtggacgag	ccgccttcgt	acgaggaggc
17461	cgtgaaggcc	ggcatgccc	ccacgcgcac	catcgcgcca	ctggccacgg	gtgtaatgaa
17521	accgcgccac	cttgacctgc	ctccaccacc	cacgcccgtc	ccaccgaagg	cagctccggt
17581	tgtgcagccc	cctccggtgg	cgaccgcgct	gcgcgcgctc	cccgcggcc	gccaggccca
17641	gaactggcag	agcacgctgc	acagtattgt	gggcctggga	gtgaaaagtc	tgaagcgccg
17701	ccgatgctat	tgagagagag	gaaggaggac	actaaaggga	gagcttaact	tgtatgtgcc
17761	ttaccgccag	agaacgcgcg	aagatggcca	ccccctcgat	gatgccgcag	tgggcgtaca
17821	tgacatcg	cgggcaggac	gcctcggagt	acctgagccc	gggtctgggt	cagtttgccc
17881	gcgccaccga	cacgtacttc	agcctgggca	acaagttag	gaaccccacg	gtggccccga
17941	cccacgatgt	gaccacggac	cggctcccagc	gtctgacgct	gcgctttgtg	cccgtggatc
18001	gcgaggacac	cacgtactcg	tacaaggcgc	gcttactctt	ggcgtggggc	gacaaccggg
18061	tgtagacat	ggccagcacg	tactttgaca	tccgcggcgt	cctggaccgc	ggctcccagtt
18121	tcaaacctta	ctcgggcacg	gcttacaaca	gccttgcccc	caagggcgct	cccaatccca
18181	gtcagtgggt	tgccaaagaa	aatggctcag	gaactgataa	gacacatact	tatggctcag
18241	ctgccatggg	aggaagcaac	atcaccattg	aaggtttagt	aattggaaact	gatgaaaaag
18301	ctgaggatgg	caaaaaagat	atttttgcaa	ataaacttta	tcagccagaa	cctcaagtag
18361	gtgaagaaaa	ctggcaagag	tctgaagcct	tctatggagg	cagagctctt	aagaaagaca
18421	caaaaatgaa	gccctgctat	ggctcatttg	caagacctac	caatgaaaaa	ggcggaacag
18481	ctaaatttaa	gccagtggaa	gaggggcagc	aacctaaaga	ttatgacata	gatttggttt
18541	tctttgacac	acctggaggc	accatcacag	gaggcacaga	cgaagaatat	aaagcagaca

FIG. 15A-5

18601	ttgtgttgta	caactgaaaat	gtcaaccttg	aaaccccaga	caccacacgtg	gtatacaagc
18661	cagggaaaaga	ggatgacagt	tcagaagtaa	atgtgacaca	gcagtgccatg	cccaacaggc
18721	ctaactacat	tggcttcaga	gacaactttg	tgggactcat	gtactacaac	agtactggca
18781	acatgggtgt	gctggctggt	caggcctctc	aattgaatgc	tgtgggtcgac	ttgcaagaca
18841	gaaacaccga	gctgtcttac	cagctcttgc	tagattctct	gggtgacaga	accagatact
18901	tcagcatgtg	gaactctgcg	gtggatagct	atgatccaga	tgtcaggatc	attgaaaatc
18961	atgggtgtgga	agatgaactt	ccaaactatt	gcttcccatt	gaatggcact	ggcaccaatt
19021	caacatatct	tggcgtaaaag	gtgaaaccag	atcaagatgg	tgatgttgaa	agcgagtggg
19081	ataaagatga	taccattgca	aggcagaatc	aaatcgccaa	gggcaacgtc	tttgccatgg
19141	agatcaacct	ccaggccaac	ctgtggaaga	gttttctgta	ctcgaacgtg	gccttgatcc
19201	tgcccgaactc	ctacaagtac	acgccggcca	atgttacgct	gcccgcgaac	accaacacct
19261	acgagtacat	gaacggccgc	gtggtagccc	cctcgctggt	ggacgcctac	atcaacatag
19321	gcgcccgatg	gtcgctggag	cccatggaca	acgtcaaccc	cttcaaccac	cttcaaccatg
19381	cgggctctgcg	ctaccgctcc	atgcttctgg	gcaacggccg	ctacgtgccc	ttccacatcc
19441	aagtgtcccca	aaagtctctt	gccatcaaga	acctgctcct	gctcccgggc	tcctacacct
19501	acgagtggaa	cttccgcaag	gatgtcaaca	tgatcctgca	gagttccctc	ggcaacgacc
19561	tgcgcgtcga	cggcgcctcc	gtccgcttcg	acagcgtcaa	cctctacgcc	accttcttcc
19621	ccatggcgca	caacaccgcc	tccaccttgg	aagccatgct	gcgcaacgac	accaacgacc
19681	agtccttcaa	cgactacctc	tcggcgcgca	acatgctcta	ccccatcccg	cccaaggcca
19741	ccaactgtgcc	catctccatc	ccctcgcgca	actgggcgcg	ttttcgcggc	tggagtttca
19801	cccgctctgaa	aaccaaggaa	actccctccc	tcggctcggg	ttttgacccc	tactttgtct
19861	actcgggctc	gatcccctac	cttgacggac	ccttttacct	taaccacacc	ttcaagaaaag
19921	tctccatcat	gttcgactcc	tcggtcagct	ggcccggcaa	cgaccggctg	ctcacgccga
19981	acgagttcga	gatcaagcgc	agcgtcgacg	gggaaggcta	caacgtggcc	caatgcaaca
20041	tgaccaagga	ctggttcctc	gtccagatgc	tctcccacta	caacatcgcc	taccagggct
20101	tccacgtgcc	cgagggctac	aaggaccgca	tgtactcctt	cttccgcaac	ttccagccca
20161	tgagcaggca	ggtggtcgat	gagatcaact	acaaggacta	caaggccgtc	accctgccct
20221	tccagcacia	caactcgggc	ttcaccggct	accttgaccc	caccatgcgc	caagggcagc
20281	cctaccccgcc	caacttcccc	taccgctca	tcggccagac	agccgtgcca	tcgctcacc
20341	agaaaagtct	cctctgcgac	agggctcatgt	ggcgcatccc	cttctccagc	aacttcatgt
20401	ccatggcgcc	cttcaccgac	ctgggtcaga	acatgttcta	cgccaactcg	gcccacgcgc
20461	tcgacatgac	cttcgaggtg	gaccccatgg	atgagccac	cgtcctctat	cttctcttcg
20521	aagtgttcga	cgtggtcaga	gtgcaccagc	cgcaccgogg	cgtcatcgag	gccgtctacc
20581	tgcgcacgcc	gttctccgcc	ggaaacgcca	ccacctaaag	atgagcggct	ccagcgaaag
20641	agagctcgcg	tccatcgtgc	gcgacctggg	ctgcgggctt	actttttggg	caccacgac
20701	acagcgatcc	cgggctttc	ttgcggcgca	caagctggcc	tgcgccattg	tgcacacggc
20761	cggccgcgag	accggaggcg	tgcactggct	cgcttcgggc	tgggaacccg	gctcgcgcac
20821	ctgctacatg	ttcgacccct	ttgggttctc	ggaccgcggg	ctcaagcaga	tttacagctt
20881	cgagtacgag	gccatgctgc	gccgaagcgc	cgtggcctct	tcgcccagac	gctgtctcag
20941	cctcgaacag	tccaccacga	ccgtgcaggg	gcccgaactc	gccgcctgcy	gacttttctg
21001	ttgcatgttc	ttgcatgcct	tcgtgcactg	gcccgaacga	cccatggagc	ggaacccac
21061	catgaacttg	ctgacggggg	tgcccaacgg	catgctacaa	tcgccacagg	tcgtgccac
21121	cctcaggcgc	aaccaggagg	agctctatcg	cttctctcgg	cgccactccc	cttactttcg
21181	ctcccaccgc	gccgccatcg	aacacgccac	cgcttttgac	aaaatgaaac	aactgcgtgt
21241	atctcaataa	acagcacttt	tattttacat	gcactggagt	atatgcaagt	tatttaaaag
21301	tcgaagggggt	tctcgcgctc	atcggtgtgc	gccgcgctgg	ggagggccac	ggtgcggtac
21361	tggtaacttg	gctgccactt	gaactcgggg	atcaccagtt	tgggcaactg	ggtctcgggg
21421	aagggtctcg	tccacatacg	cggctcctc	tgcagggcgc	ccagcatgtc	cggggcggat
21481	atcttgaaat	cgcagttggg	accggtgtct	tgcgcgcgcg	agttgcggta	cacgggggtg
21541	cagcactgga	acaccatcag	actggggtac	tttacgctgg	ccagcacgct	cttgtcgtcg
21601	atctgatcct	tgtccagatc	ctcggcggtg	ctcacgccga	atggggctcat	cttgacagct
21661	tggcgaccca	ggaatggcac	gctctgaggg	ttgtgggttac	actcgcagtg	cacggggcatc
21721	agcatcatcc	ccgcgcgcgc	ctgcatatcc	gggtagaggc	cttgacaaaag	gccgtgatct
21781	gcttgaaagc	ttgttggggc	ttggccctct	cgctgaaaaa	caggccgcag	ctcttccgcg
21841	tgaactgggt	attcccgcac	ccggcatcct	gcacgcagca	gcgcgcgtca	tggctgggtca
21901	ggtgcaccac	gcttcttccc	cagcgggtct	gggtcacctt	ggctttgctg	ggttgctcct
21961	tcaacgcgcg	ctgcccgttc	tcgctgggtc	catccatctc	caccacgtgg	tccttggtga
22021	tcatcacctg	tccatgcaga	cacttgagct	ggccttccac	ctcgggtgcag	ccgtgatccc
22081	acagggcact	gccgggtgcac	tcccagttct	tgtgcgcgat	cccgtctgtg	ctgaagatgt
22141	aaccttgcaa	gaggcgaccc	atgatgggtg	taaagctctt	ctgggtgggtg	aagggttagtt
22201	gcagaccgcg	ggcctcctcg	ttcatccagg	tctggcacat	cttttggaag	atctcgggtct
22261	gctcgggcat	gagcttgtaa	gcacgcgcga	ggccgctgtc	gacgcggtaa	cgttccatca

FIG. 15A-6

22321	gcacgttcat	ggtatccatg	cccttttccc	aggacgagac	cagaggcaga	ctcaggggggt
22381	tgcgcacgtt	caggacaccg	gggggtckcgg	gctcgacgat	acgttttccg	tccttgccctt
22441	ccttcaacag	aaccggaggc	tggctgaatc	ccactccac	aatcacggca	tcttctctggg
22501	gcatctcttc	gtcgggggtct	accttgggtca	catgcttgggt	ctttctgggt	tgcttctttt
22561	ttggagggct	gtccacgggg	accacgtcct	ctcgggaagac	ccggagccca	cccgtctgata
22621	ctttcggcgc	ttggtgggca	gaggaggtgg	cggcggcgag	gggctcctct	cgtgctccgg
22681	cggatagcgc	gccgacccgt	ggccccgggg	cggagtggcc	tctcgctcca	tgaaccggcg
22741	cacgtctgac	tgccgcccgc	cattgtttcc	taggggaaga	tggaggagca	gccgcgtaag
22801	caggagcagg	aggaggactt	aaccaccac	gagcaaccac	aaatcgagca	ggacctgggc
22861	ttcgaagagc	cggctcgtct	agaacccac	aggatgaaca	ggagcacgag	caagacgcag
22921	gccaggagga	gaccgacgct	gggctcgagc	atggctacct	gggaggagag	gaggatgtgc
22981	tgctgaaaca	cctgcagcgc	cagtcctca	tcctccggga	cgccctggcc	gaccggagcg
23041	aaacccccct	cagcgtcgag	gagctgtgtc	gggcctacga	gctcaacctc	ttctcgccgc
23101	gcgtgcccc	caaacgccag	cccaacggca	cctgcgagcc	caaccccgct	ctcaacttct
23161	atcccgtctt	tgcggtcccc	gaggcccttg	ccacctatca	catctttttc	aagaaccaa
23221	agatccccgt	ctcctgccgc	gccaacgcga	cccgcgccga	cgcgctcctc	gctctggggc
23281	ccggcgcgcg	catacctgat	attgcttccc	tgggaagagt	cccaaatct	tcgaagggct
23341	cggtcgggac	gagacgcgcg	cggcgaaacg	ctctgaaaga	aacagcagag	gaagaggggt
23401	acactagcgc	cctggtagag	ttggaaggcg	acaacgccag	gctggccgtg	ctcaagcgca
23461	gcgttgagct	caccacttc	gcctacccc	ccgtcaacct	ccgcaccaag	gtcatgcgtc
23521	gcatcatgga	tcagctaata	atgccccaca	tcgaggccct	cgatgaaagt	caggagcagc
23581	gccccgagga	caccgggccc	gtggtcagcg	atgagcagct	tgcgcgctgg	cttggtaccc
23641	gcgaccccca	ggccctggag	cagcggcgca	agctcatgct	ggccgtgggt	ctggtcaccc
23701	tcgagctcga	atgcatgcga	cgctttttca	gcgaccccca	gacctgcgca	aggctcagga
23761	gacctgcact	acacttttag	cacgtttcgt	caggcaggca	tgcaagatct	ccaacgtgga
23821	gctgaccaac	tggtctcctg	cctgggaatc	ctgcacgaga	accgctggg	gcagacagt
23881	ctccactcga	ccctgaagg	cgaggcgcg	cgggactatg	tccgcgactg	cgtctttctc
23941	tttctctgcc	acacatggca	agctgccatg	ggcgtgtggc	agcagtgtct	cgaggacgag
24001	aacctgaagg	agctggacaa	gcttcttgg	agaaacctca	aaaagctgtg	gacgggcttt
24061	gacgagcgca	ccgtcgcttc	ggacctggcc	gagatcgctc	tccccgagc	gcttgaggca
24121	gacgctgaaa	ggcgggctgc	ccgacttcat	gagccagagc	atgttgcaaa	actaccgcac
24181	tttcatcttc	gagcgatctg	ggatgctgcc	cgccacctgc	aacgccttcc	cctccgactt
24241	tgtcccgctg	agctaccgcg	agtgtcccc	gccgctgtgg	agccactgct	acctcttgca
24301	gctggccaac	tacatcgctt	accactcgga	tggtatcgag	gacgtgagcg	gcgaggggct
24361	gctagagtgc	cactgccgct	gcaacctgtg	ctctccgcac	cgctcctggt	ctgcaacccc
24421	cagctcctga	gcgagaccac	ggctcatcgt	accttcgagc	tgcaaggtcc	cgaggagtcc
24481	accgctccgc	tgaaactcac	gcgggggttg	tggacttccg	cgtacctgcg	caaatttgta
24541	cccaggagact	accacgccca	tgagataaag	ttcttcgagg	accaatcgcg	cccgcagcac
24601	gcggatctca	cggcctgcgt	catcaccag	ggcgcgatcc	tcgccaatt	gcacgccatc
24661	caaaaatccc	gccaaagatt	tcttttgaaa	aagggtagag	gggtctatct	ggacccccag
24721	acgggcgaag	tgctcaaccc	gggtctcccc	cagcatgccg	aagaagaaca	ggagccgcta
24781	gtggaagaga	tggaagaaga	atgggacagc	cagcagaaga	agacgaatgg	gaagaagaga
24841	cagaagaaga	agaattggaa	aagtgggaaga	agagcagcac	agacaccgtc	gccgcaccat
24901	ccgcgccgca	gcccggcggt	cacggataca	actcgcagtc	cgccaagctc	ctcgtagatg
24961	gatcgagtga	aggtgacggt	aagcacgagc	ggcagggcta	cgaatcatgg	aggcccacaa
25021	agcgggatca	tcgcctgctt	gcaagactgc	gggggggaaca	tcgtttcgcc	cgccgctatc
25081	tgctcttcca	tcgcgggggtg	aacatcccc	gcaacgtgtt	gcattactac	cgtcaccttc
25141	acagctaaga	aaaaatcaga	gtaagaggag	tcgccggagg	aggcntgagg	atcgcggcga
25201	acgagccatt	gaccaccagg	gcgggggttg	atcggtatctt	ccccactctt	tatgccattt
25261	ttcagcagag	tcgaggtcag	cagcaagagc	tcaaagtaaa	aaaccggctc	ctgcgctcgc
25321	tcaccgcgag	ttgcttgtac	cacaaaaacg	aagatcagct	gcagcgcact	ctcgaagacg
25381	ccgaggctct	gttcacacaag	tactgcgcgc	tcactcttaa	agactaaggc	gcgcccaccc
25441	ggaaaaaagg	cgggaattac	ctcatcgcca	ccatgagcaa	ggagattccc	acctcttaca
25501	tgtggagcta	tcagccccag	atgggcctgg	ccgcggcgcg	ctccccaggac	tactccaccc
25561	gcatgaactg	gctcagtgc	ggccccctga	tgatctcacg	ggtcaacggg	gtccgtaacc
25621	atcgaaacca	gatattgttg	gagcaggcgg	cggtcacctc	aacgcccagg	caaagctcaa
25681	cccgcgtaat	tggccctcca	ccctgggtgta	tcaggaaatc	cccgggccga	ctaccgtact
25741	acttccgcgt	gacgcactgg	ccgaagtccg	catgactaac	tcaggtgtcc	agctggccgg
25801	cggcgcttcc	cgggtgcccgc	tcgcgccaca	atcgggtata	aaaaccttgg	tgatacaggg
25861	cagagccaca	cagctcaacg	accggttgg	gagctcttca	atcggctcgc	gaccggacgg
25921	agtgttccaa	ctagccggag	ccgggagatc	gtccttcaact	cccaaccagg	ctacctgacc
25981	ttgcagagca	gctcttcgga	gcctcgctcc	ggaggcatcg	gaaccttcca	gtttgtggag

FIG. 15A-7

26041	gagtttgtgc	cctcgggtcta	cttcaacccc	ttctcgggat	cggcaggcct	ctacccggac
26101	gagttcatac	cgaacttcga	cgcagtgaga	gaagcgggtg	acggccacga	ctgaatgtct
26161	tatggtgact	cggctgagct	cgctcgggtg	aggcacctag	accactgccg	ccgctgtcgc
26221	tgcttcgccc	gggagagctg	cggacttatc	tactttgagt	ttcccaggga	gcaccccaac
26281	ggccctgcac	acggagtgcg	gatcaccgta	gagggcacca	ccgagttctca	cctggttagg
26341	ttcttcaccc	agcaaccctt	cctggtcgag	cgggaccggg	gaggcaccac	ctacaccgtc
26401	tactgcatct	gtccaacccc	gaagttgcat	gagaattttt	gttgactctt	gtgtgctgag
26461	tttaataaaa	gctaaactcc	tacaatactc	tgggatcccg	tgctcgcgca	ctcgcaacaa
26521	gaccttcaac	ctcaccaacc	agactgaggt	aaaattcaac	tgcagaccgg	gggacaaata
26581	catcctctgg	ctttttaaaa	acacttcctt	cgcagtctcc	aacgcctgcg	ccaacgacgg
26641	tattgaaata	cccaacaacc	ttaccagtgg	actaacttat	actaccagaa	agactaagct
26701	agtactctac	aatccttttg	tagagggaa	ctaccactgc	cagagcggag	cttgcttcca
26761	cacttttact	ttggtgaacg	ttaccgacag	cagcacagcc	gctcacagaa	gctataacct
26821	tctttttgat	actaacactc	ctaaaaccgg	aggtgagctc	tgggttccct	ctctaacaga
26881	ggggggtaaa	catattgaag	cgggttgggt	tttgatttta	ggggtggtcc	tgggtgggtg
26941	catagcgggtg	ctgtattacc	ttccttgctg	gatcgaaatc	aaaatcttta	tctgctgggt
27001	cagacattgt	tgggaggaac	catgaagggg	ctcttgctga	ttatcctttc	cctggtgggg
27061	ggtgtactgt	catgccacga	acagccacga	tgtaacatca	ccacaggcaa	tgagaggagt
27121	gtgatattgca	cagtagtctc	caaatgcgag	ctacatgccc	ctctcaacat	cacattcaaa
27181	aaccgtacca	tgggaaatgc	atgggtgggc	gactgggaac	caggagatga	gcagaactac
27241	acgggtcactg	tccatggtag	caatggaaat	cacacttttg	gtttcaaatt	catttttgaa
27301	gtcatgtgtg	atatcacact	gcatgtggct	agacttcatg	gcttggtggc	ccctaccaag
27361	gataacatgg	ttgggttttc	tttggttttt	gtgatcatgg	cctgtgcaat	gtcaggtctg
27421	ctggtagggg	ctttagtgtg	gttcctaaag	cgcgaagccta	ggtatggaaa	tgaggagaag
27481	gaaaaattgc	tataaatctt	ttctcttcgc	agaaccatga	atacagtgat	ccgtatcgtg
27541	ctgctctctc	ttcttgtaac	ttttagtcag	gcaggattca	taccatcaat	gctacatggt
27601	gggctaatat	aacttttagt	ggacctcaga	tattccagat	cacatgggat	gatagcactg
27661	gattgcaatt	ttgtgatgga	agtacagtta	agaatccaca	gatcagacat	agttgtaatg
27721	atcaaaaactt	aactctgatt	catgtgaaca	aaacccatga	aagaacatac	atgggctata
27781	ataagcagag	tactcataaa	gaagactata	aagtcacagt	tataccacct	cctcctgtta
27841	ctgtaaagcc	acaaccagag	ccagaatatg	tgtatgttaa	tatgggagag	aacaaaacct
27901	tagtttgggcc	tccaggaatt	ccagttagtt	ggtttaatac	ggatggttta	caattttgca
27961	ttgggggataa	agtttttcat	ccagaattca	accacacctg	tgacatgcaa	aatcttacac
28021	tgttgttttat	aaatcttaca	catgatggag	cttatcttgg	ttataatcgc	cagggaaactg
28081	aaagaacttg	gtatgaggtt	gtagtgtcag	atggttttcc	aaaatcagaa	gagatgaagg
28141	tagaagacca	tagtaaagaa	acagaacaaa	aacagactgg	tcaaaaacaa	agtgaccata
28201	agcagggtgg	gcaaaaagaa	acaagtcaaa	agaaaactaa	tgacaaaacaa	aagccatcgc
28261	gcaggaggcc	atctaaacta	aagccaaaca	cacctgacac	aaaactaatt	acagtcacta
28321	gtgggtcaaaa	cgtaacttta	gttggtccag	atggaaaagg	cacttggtat	gatgatgatt
28381	taaaaagacc	atgtgagcct	gggtataagt	taggggtgtaa	gtgtgacaat	caaaacctaa
28441	ccctaatacaa	tgtactaaa	ctttatgagg	gagtttacta	tgggtactaat	gacagaggca
28501	acagcaaaag	atacagagta	aaagtaaaaa	ctactaattc	tcaaaagtgtg	ttatctcagc
28561	cgtacaccag	gcctactact	cctgatcaga	aacacagatt	tgaattgcaa	attgattcta
28621	atcaagacaa	aattccatca	actactgtgg	caatcgtggg	gggagtgatc	gcggtctttg
28681	taactctaata	cattattttc	atatgtctaca	tctgtgcccg	caagcgtccc	aggtcataca
28741	atcatatggt	agaccacta	ctcagcttct	cttactgaaa	ctcagtcact	ctcatttcag
28801	aaccatgaag	gctttcacag	cttgcggtct	gattagcata	gtcacactta	gttcagctgc
28861	aatgattaat	gttaatgtca	ctagaggtgg	taaaattaca	ttgaatggga	cttatccaca
28921	aactacatgg	acaagatatc	ataaagatgg	atggaaaaat	atttgtgaat	ggaatgttac
28981	tgcatacaaa	tgcttcaata	atggaagcat	tactattact	gccactgcc	acattacttc
29041	tggcacatac	aaagctgaaa	gctataaaaa	tgaaattaaa	aaattaacct	ataaaaaacaa
29101	caaaaccaca	tttgaagatt	ctggaaatta	tgagcatcaa	aaattatctt	tttatatgtt
29161	gacaataatt	gaactgccta	caaccaaggc	accaccaca	gttagtacaa	ctacacagtc
29221	aactgttaag	accactactc	acactacaca	gctagacacc	acagtgcaga	ataaactgtg
29281	gttggttagg	tatttgttga	gggaggaaa	tactactgaa	cagacagagg	ctacctcaag
29341	tgcttttatc	agcactgcaa	atttaacttc	gcttgcttgg	actaatgaaa	ccggagtatc
29401	attgatgcat	ggccagcctt	actcaggttt	ggatattcaa	attacttttc	tgggtgtctg
29461	tgggatcttt	attcttgtgg	ttcttctgtg	ctttgtctgc	tgtaaagcca	gaaagaaatc
29521	taggaggccc	atctacagcg	cagtgattgg	ggaacctcag	ccactccaag	tggatggagg
29581	cttaagggaat	cttcttttct	ctttttacagt	atgggtgatca	gccatgattc	ctagtctctc
29641	ctattttaaca	tcctcttctg	tctcttcaac	atctgtgctg	cctttgcggc	agtttcgcac
29701	gcctcgcccc	actgtctagg	gcctttcccc	acctactcct	ctttgcctg	ctcacctgca

FIG. 15A-8

29761	cctgcgtctg	cagcattgtc	tgccctgg	tcaccttctc	gcagctc	gactgggtg
29821	gcgcgcgcta	caattacttc	atcatagtc	cgaatacagg	gacgagaacg	tagccagaat
29881	tttaaggctc	atatgaccat	gcagactctg	ctcatactgc	tatcgctctt	atcccatgcc
29941	ctcgctactg	ctgattactc	taaatgcaaa	ttggcggaca	tatggaattt	cttagactgc
30001	tatcaggaga	aaattgat	gccctcctat	tacttgggtga	ttgtgggaat	agttatggtc
30061	tgctcctgca	ctttctttgc	catcatgatc	taccctgtt	ttgatcttgg	atggaactct
30121	gttgaggcat	tcacatacac	actagaaagc	agttcactag	cctccacgcc	accaccaca
30181	ccgcctcccc	gcagaaatca	gtttcccatg	attcagtagt	tagaagagcc	ccctccccga
30241	cccccttcca	ctgttagcta	ctttcacata	accggcggcg	atgactgacc	accacctgga
30301	cctcgagatg	gacggccagg	cctccgagca	gcgcacctctg	caactgcgcg	tccgtcagca
30361	gcaggagcgt	gccgccaagg	agctcctcga	tgccatcaac	atccaccagt	gcaagaaggg
30421	catcttctgc	ctggtcaa	aggcaaagat	cacctacgag	ctcgtgtcca	acggcaaaca
30481	gcactgcctc	acctatgaga	tgccccagca	gaagcagaag	ttcacctgca	tggtggcggt
30541	caaccacata	gtcatcaccc	agcagctggg	cgagaccaac	ggctgcaccc	actgctcctg
30601	cgaaagcccc	gagtgtatct	actcccttct	caagaccctt	tgccgactcc	gcgacctctt
30661	ccccatgaac	tgatgttgat	taaaaaccaa	aaaaaacaat	cagccccttc	ccctatccca
30721	aattactcgc	aaaaataaat	cattggaact	aatcatttaa	taaagatcac	ttacttgaaa
30781	tctgaaagta	tgtctctggt	gtagtgtgtc	agcagcacct	cggtagccctc	ctcccaactc
30841	tggtactcca	gtctccggcg	ggcggcgcaac	tttctccaca	ccttgaaagg	gatgtcaaat
30901	tcttggtcca	caattttcat	tgtcttccct	ctcagatgtc	aaagaggctc	cgggtggaag
30961	atgacttcaa	ccccgtctac	ccctatggct	acgcgcggaa	tcagaatata	cccttctctca
31021	ctccccctt	tgtctcctcc	gatggattca	aaaacttccc	ccctgggggtc	ctgtcactca
31081	aactggctga	cccaatcacc	atagccaatg	gtgatgtctc	actcaagggtg	ggagggggac
31141	ttactttgca	agaaggaagt	atgactgtag	accctaaggc	tcccttgcaa	cttgcaaca
31201	ataaaaaact	tgagcttgtt	tatgttgatc	catttgaggt	tagtgccaat	aaacttagtt
31261	taaaagtagg	acatggatta	aaaatattag	atgacaaaag	tgctggaggg	ttgaaagatt
31321	taattggcaa	acttgtgggt	ttaacaggga	aaggaatagg	cactgaaaat	ttgcaaaata
31381	cagatggtag	cagcagagga	attggtataa	gtgtaagagc	aagagaaggg	ttaacatttg
31441	acaatgatgg	atacttggtg	gcattggaac	caaagtatga	cacgcgcaca	ctttggacaa
31501	taccagacac	atctccta	tgaggatttg	ataaggagaa	ggattcaaaa	ctcactttgg
31561	tacttacaaa	gtgtggaagt	caaataatag	ctaattgtgc	tttgattgtg	gtgtcaggaa
31621	aatatcaata	catagaccac	gctacaaatc	caactcttaa	atcattttaa	ataaaacttc
31681	tttttgataa	taaagggtga	cttctcccaa	gttcaaacct	tgattccaca	tattggaact
31741	ttagaagtga	caatttaact	gtatctgagg	catataaaaa	tgagttgaa	tttatgccta
31801	atgttgtagc	ctacccaaaa	cctaccactg	gctctaaaaa	atatgcaagg	gatatagtct
31861	atgggaacat	atatcttgga	ggttttggcat	atcagccagt	tgtaattaa	gttactttta
31921	atgaagaagc	agatagtgtc	tactctataa	catttggaatt	tgtatggaat	aaagaatatg
31981	ccagggttga	atgtgaaacc	acttctctta	ccttctccta	tattgcccac	caataaaaga
32041	ccaataaacg	tgttttttat	ttcaaatttt	atgtatcttt	attgattttt	acaccagcgc
32101	gagtagtcaa	tctcccacca	ccagcccat	tcacagtgtg	cacggttctc	tcagcacggt
32161	ggccttaaat	aaggaaatgt	tctgattatt	gcgggaactg	gacttggggg	ctataatcca
32221	cacagtttcc	tgacgagcca	aacggggatc	ggtgattgaa	atgaagccgt	ctcttgaaaa
32281	gtcatccaag	cgggcctcac	agtcagggtc	acagtctggt	ggaaagagaa	gaacgcacag
32341	attcatactc	ggaaaacagg	atgggtctgt	gcctctccat	cagcgccttc	agcagtctct
32401	gccgcggggg	ctcggtgcgg	ctgctgcaaa	tgggatcggg	atcacaagtc	tctctaacta
32461	tgatcccaac	agccttcagc	atcagtctcc	tggtgcgtcg	agcacagcac	cgcactctga
32521	tctctgccat	gttctcacag	taagtgcagc	acataatcac	catgttatct	agcagcccat
32581	aattcagggt	gctccagcca	aagctcatgt	tggggatgat	ggaacccacg	tgaccatcgt
32641	accagatgcy	gcagtatact	aggtgcctgc	ccctcatgaa	cacactgccc	atatacatga
32701	tctctttggg	catgtttctg	tttacaatct	ggcggtacca	ggggaagcgc	tggttgaaca
32761	tgaccccgta	aatgactctc	ctgaaccaca	cggccagcag	ggtgcctccc	gcccgcact
32821	gcaggggagcc	aggggatgaa	cagtggaact	gcaggatcca	gcgctcgtac	ccgctcacca
32881	tctgagctct	taccaagtcc	agggtagcgg	ggcacaggca	cactgacata	catcttttta
32941	aaatttttat	ttcctctgtg	gtgaggatca	tatcccaggg	gactggaaac	tcttggaaga
33001	gggttaaagcc	agcagcacat	ggtaatccac	ggacagaact	tacattatga	taatctgcat
33061	gatcacaaatc	gggcaacagg	ggatgttgat	cagtcagtga	agccctgggt	tcatcatcag
33121	atcggtggtaa	acgggccctg	cgatatggat	gatggcggag	cgagctggat	tgaatctcgg
33181	tttgcatgtgt	agtggattct	cctgcgtacc	ttgtcgtact	tctgccagca	gaaatgggcc
33241	cttgaacagc	atataccctt	ctgcggccg	tcctttcgtc	gctgcgcgtc	gactatccaa
33301	ctgaagtaca	tccattctcg	aagattctcg	agaagttcct	ctgcatctga	tgaataaaaa
33361	aaccctgcca	tgcaatttcc	cctcatcaca	tcagccagga	ctctgtaggc	catccccatc
33421	cagttaatgc	tgccctgtct	atcattcaga	gggggcgggtg	gcaggattgg	aagaaccatt

FIG. 15A-9



33481	tttattccaa	acggtctcga	aggacgataa	agtgcaagtc	acgcaggtga	cagcgttccc
33541	ctccgctgtg	ctggttgaaa	cagacagcca	ggtcaaaacc	cactctattd	tcaagggtgct
33601	cgaccgtggc	ttcgagcagt	ggctctacgc	gtacatccag	cataagaatc	acattaaagg
33661	ctggccctcc	atcgatttca	tcaatcatca	ggttacattc	ctgcaccatc	cccaggtaat
33721	tctcattttt	ccagccttgg	attatctcta	caaattgttg	gtgtaaatcc	actccgcaca
33781	tgttgaaaag	ctcccacagt	gccccctcca	ctttcataat	caggcagacc	ttcataatag
33841	aaacagatcc	tgctgctcca	ccacctgcag	cgtgttcaaa	acaacaagat	tcaataaggt
33901	tctgccctcc	gccctgagct	cgcgcctcaa	tgtcagctgc	aaaaagtcac	ttaagtcctg
33961	ggccactaca	gctgacaatt	cagagccagg	gctaagcgtg	ggactggcaa	gcgtgagggg
34021	aaactttaat	gctccaaagc	tagcacccaa	aaactgcatg	ctggaataag	ctctctttgt
34081	gtctccggtg	atgccttcca	aaatgtgagt	gataaagcgt	ggtagttttt	tctttaatca
34141	tttgcgtaat	agaaaagtcc	tgtaaataag	tactaggac	cccagggacc	acaatgtggt
34201	agcttacacc	gcgtcgtga	aagcatgggt	agtagagatg	agagtctgaa	aaacagaaaag
34261	catgcgctaa	actaagggtg	ctattttcac	tgaaggaaaa	atcactcttt	ccagcagcag
34321	ggtacccact	gggtggccct	tgcggaata	caaaaatcgg	tccgtgtgat	taaaaagcag
34381	cacagtaagt	tcctgtcttc	ttccggcaaa	aatcacatcg	gactgggtta	gtatgtccct
34441	ggcatggtag	tcattcaagg	ccataaatct	gccctgatat	ccagtaggaa	ccagcacact
34501	cacttttagg	tgaagcaata	ccaccccatg	cggaggaatg	tggaaagatt	cagggcaaaa
34561	aaaattatat	ctattgctag	cccttcctgg	acgggagcaa	tcctccagga	ctatctatga
34621	aagcatacag	agattcagcc	atagctcagc	ccgcttacca	gtagacaaaag	agcacagcag
34681	tacaagcgcc	aacagcagcg	actgactacc	cactgactta	gctccctatt	taaaggcacc
34741	ttacactgac	gtaatgacca	aaggtctaaa	aaccccgcca	aaaaaacaca	cacgccctgg
34801	gtgtttttgc	gaaaacactt	ccgcgttctc	acttcctcgt	atcgatttcg	tgacttgact
34861	tccgggttcc	cacgttacgt	cacttttgcc	cttacatgta	acttagtcgt	agggcgccat
34921	cttgcccacg	tccaaaatgg	cttacatgtc	cagttacgcc	tccgcggcga	ccgttagccg
34981	tgcgtcgtga	cgtcatttgc	atcaacgttt	ctcggccaat	cagcagtagc	ccgcacctaa
35041	attttaaacc	tcatttgcac	attaactttt	gtttactttg	tggggtatat	tattgatgat
35101	g					

FIG. 15A-10

PacI  
~~~~~

|     |            |            |            |            |            |
|-----|------------|------------|------------|------------|------------|
| 1   | TTCTTAATTA | ACATCATCAA | TAATATACCT | TATTTTGGAT | TGAAGCCAAT |
|     | AAGAATTAAT | TGTAGTAGTT | ATTATATGGA | ATAAAACCTA | ACTTCGGTTA |
| 51  | ATGATAATGA | GGGGGTGGAG | TTTGTGACGT | GGCGCGGGGC | GTGGGAACGG |
|     | TACTATTACT | CCCCACCTC  | AAACACTGCA | CCGCGCCCCG | CACCCTTGCC |
| 101 | GGCGGGTGAC | GTAGTAGTGT | GGCGGAAGTG | TGATGTTGCA | AGTGTGGCGG |
|     | CCGCCCACTG | CATCATCACA | CGCCTTCAC  | ACTACAACGT | TCACACCGCC |
| 151 | AACACATGTA | AGCGACGGAT | GTGGCAAAAG | TGACGTTTTT | GGTGTGCGCC |
|     | TTGTGTACAT | TCGCTGCCTA | CACCGTTTTT | ACTGCAAAAA | CCACACGCGG |
| 201 | GGTGTACACA | GGAAGTGACA | ATTTTCGCGC | GGTTTTAGGC | GGATGTTGTA |
|     | CCACATGTGT | CCTTCACTGT | TAAAAGCGCG | CCAAAATCCG | CCTACAACAT |
| 251 | GTAAATTTGG | GCGTAACCGA | GTAAGATTTG | GCCATTTTCG | CGGGAAAACT |
|     | CATTTAAACC | CGCATTGGCT | CATTCTAAAC | CGGTAAAAGC | GCCCTTTTGA |
| 301 | GAATAAGAGG | AAGTGAAATC | TGAATAATTT | TGTGTTACTC | ATAGCGCGTA |
|     | CTTATTCTCC | TTCACTTTAG | ACTTATTAAA | ACACAATGAG | TATCGCGCAT |
| 351 | ATATTTGTCT | AGGGCCGCGG | GGACTTTGAC | CGTTTACGTG | GAGACTCGCC |
|     | TATAAACAGA | TCCCGGCGCC | CCTGAAACTG | GCAAATGCAC | CTCTGAGCGG |
| 401 | CAGGTGTTTT | TCTCAGGTGT | TTTCCGCGTT | CCGGGTCAAA | GTTGGCGTTT |
|     | GTCCACAAAA | AGAGTCCACA | AAAGGCGCAA | GGCCCAGTTT | CAACCGCAAA |
| 451 | TATTATTATA | GGCGGCCGCG | ATCCATTGCA | TACGTTGTAT | CCATATCATA |
|     | ATAATAATAT | CCGCCGGCGC | TAGGTAACGT | ATGCAACATA | GGTATAGTAT |
| 501 | ATATGTACAT | TTATATTGGC | TCATGTCCAA | CATTACCGCC | ATGTTGACAT |
|     | TATACATGTA | AATATAACCG | AGTACAGGTT | GTAATGGCGG | TACAACTGTA |
| 551 | TGATTATTGA | CTAGTTATTA | ATAGTAATCA | ATTACGGGGT | CATTAGTTCA |
|     | ACTAATAACT | GATCAATAAT | TATCATTAGT | TAATGCCCCA | GTAATCAAGT |
| 601 | TAGCCCATAT | ATGGAGTTCC | GCGTTACATA | ACTTACGGTA | AATGGCCCGC |
|     | ATCGGGTATA | TACCTCAAGG | CGCAATGTAT | TGAATGCCAT | TTACCGGGCG |
| 651 | CTGGCTGACC | GCCCAACGAC | CCCCGCCCAT | TGACGTCAAT | AATGACGTAT |
|     | GACCGACTGG | CGGGTTGCTG | GGGGCGGGTA | ACTGCAGTTA | TTACTGCATA |
| 701 | GTTCCCATAG | TAACGCCAAT | AGGGACTTTC | CATTGACGTC | AATGGGTGGA |
|     | CAAGGGTATC | ATTGCGGTTA | TCCCTGAAAG | GTAACGTCAG | TTACCCACCT |
| 751 | GTATTTACGG | TAAACTGCCC | ACTTGGCAGT | ACATCAAGTG | TATCATATGC |
|     | CATAAATGCC | ATTTGACGGG | TGAACCGTCA | TGTAGTTCAC | ATAGTATACG |

FIG. 16A-1

|      |            |             |             |            |            |
|------|------------|-------------|-------------|------------|------------|
| 801  | CAAGTACGCC | CCCTATTGAC  | GTCAATGACG  | GTAAATGGCC | CGCCTGGCAT |
|      | GTTCATGCGG | GGGATAACTG  | CAGTTACTGC  | CATTTACCGG | GCGGACCGTA |
| 851  | TATGCCCAGT | ACATGACCTT  | ATGGGACTTT  | CCTACTTGGC | AGTACATCTA |
|      | ATACGGGTCA | TGTACTGGAA  | TACCCTGAAA  | GGATGAACCG | TCATGTAGAT |
| 901  | CGTATTAGTC | ATCGCTATTA  | CCATGGTGAT  | GCGGTTTTTG | CAGTACATCA |
|      | GCATAATCAG | TAGCGATAAT  | GGTACCACTA  | CGCCAAAACC | GTCATGTAGT |
| 951  | ATGGGCGTGG | ATAGCGGTTT  | GACTCACGGG  | GATTTCCAAG | TCTCCACCCC |
|      | TACCCGCACC | TATCGCCAAA  | CTGAGTGCCC  | CTAAAGGTTC | AGAGGTGGGG |
| 1001 | ATTGACGTCA | ATGGGAGTTT  | GTTTTGGCAC  | CAAAATCAAC | GGGACTTTCC |
|      | TAAGTGCAGT | TACCCTCAAA  | CAAACCGTG   | GTTTTAGTTG | CCCTGAAAGG |
| 1051 | AAAATGTCGT | AACAACCTCCG | CCCCATTGAC  | GCAAATGGGC | GGTAGGCGTG |
|      | TTTTACAGCA | TTGTTGAGGC  | GGGGTAACTG  | CGTTTACCCG | CCATCCGCAC |
| 1101 | TACGGTGGGA | GGTCTATATA  | AGCAGAGCTC  | GTTTAGTGAA | CCGTCAGATC |
|      | ATGCCACCCT | CCAGATATAT  | TCGTCTCGAG  | CAAATCACTT | GGCAGTCTAG |
| 1151 | GCCTGGAGAC | GCCATCCACG  | CTGTTTTGAC  | CTCCATAGAA | GACACCGGGA |
|      | CGGACCTCTG | CGGTAGGTGC  | GACAAAACCTG | GAGGTATCTT | CTGTGGCCCT |
| 1201 | CCGATCCAGC | CTCCGCGGCC  | GGGAACGGTG  | CATTGGAACG | CGGATTCCCC |
|      | GGCTAGGTCG | GAGGCGCCGG  | CCCTTGCCAC  | GTAACCTTGC | GCCTAAGGGG |
| 1251 | GTGCCAAGAG | TGAGATCTAC  | CATGGGTGCT  | AGGGCTTCTG | TGCTGTCTGG |
|      | CACGGTTCTC | ACTCTAGATG  | GTACCCACGA  | TCCCGAAGAC | ACGACAGACC |
| 1301 | TGGTGAGCTG | GACAAGTGGG  | AGAAGATCAG  | GCTGAGGCCT | GGTGGCAAGA |
|      | ACCACTCGAC | CTGTTCACCC  | TCTTCTAGTC  | CGACTCCGGA | CCACCGTTCT |
| 1351 | AGAAGTACAA | GCTAAAGCAC  | ATTGTGTGGG  | CCTCCAGGGA | GCTGGAGAGG |
|      | TCTTCATGTT | CGATTTCGTG  | TAACACACCC  | GGAGGTCCCT | CGACCTCTCC |
| 1401 | TTTGCTGTGA | ACCCTGGCCT  | GCTGGAGACC  | TCTGAGGGGT | GCAGGCAGAT |
|      | AAACGACACT | TGGGACCGGA  | CGACCTCTGG  | AGACTCCCCA | CGTCCGTCTA |
| 1451 | CCTGGGCCAG | CTCCAGCCCT  | CCCTGCAAAC  | AGGCTCTGAG | GAGCTGAGGT |
|      | GGACCCGGTC | GAGGTCGGGA  | GGGACGTTTG  | TCCGAGACTC | CTCGACTCCA |
| 1501 | CCCTGTACAA | CACAGTGGCT  | ACCCTGTACT  | GTGTGCACCA | GAAGATTGAT |
|      | GGGACATGTT | GTGTCACCGA  | TGGGACATGA  | CACACGTGGT | CTTCTAACTA |
| 1551 | GTGAAGGACA | CCAAGGAGGC  | CCTGGAGAAG  | ATTGAGGAGG | AGCAGAACAA |
|      | CACTTCCTGT | GGTTCCTCCG  | GGACCTCTTC  | TAACTCCTCC | TCGTCTTGTT |

FIG. 16A-2

|      |             |             |            |             |            |
|------|-------------|-------------|------------|-------------|------------|
| 1601 | GTCCAAGAAG  | AAGGCCCAGC  | AGGCTGCTGC | TGGCACAGGC  | AACTCCAGCC |
|      | CAGGTTCTTC  | TTCCGGGTCG  | TCCGACGACG | ACCGTGTCCG  | TTGAGGTCGG |
| 1651 | AGGTGTCCCA  | GAACTACCCC  | ATTGTGCAGA | ACCTCCAGGG  | CCAGATGGTG |
|      | TCCACAGGGT  | CTTGATGGGG  | TAACACGTCT | TGGAGGTCCC  | GGTCTACCAC |
| 1701 | CACCAGGCCA  | TCTCCCCCCG  | GACCCTGAAT | GCCTGGGTGA  | AGGTGGTGGA |
|      | GTGGTCCGGT  | AGAGGGGGGC  | CTGGGACTTA | CGGACCCACT  | TCCACCACCT |
| 1751 | GGAGAAGGCC  | TTCTCCCCTG  | AGGTGATCCC | CATGTTCTCT  | GCCCTGTCTG |
|      | CCTCTTCCGG  | AAGAGGGGAC  | TCCACTAGGG | GTACAAGAGA  | CGGGACAGAC |
| 1801 | AGGGTGCCAC  | CCCCCAGGAC  | CTGAACACCA | TGCTGAACAC  | AGTGGGGGGC |
|      | TCCCACGGTG  | GGGGGTCCCTG | GACTTGTGGT | ACGACTTG TG | TCACCCCCCG |
| 1851 | CATCAGGCTG  | CCATGCAGAT  | GCTGAAGGAG | ACCATCAATG  | AGGAGGCTGC |
|      | GTAGTCCGAC  | GGTACGTCTA  | CGACTTCCTC | TGGTAGTTAC  | TCCTCCGACG |
| 1901 | TGAGTGGGAC  | AGGCTGCATC  | CTGTGCACGC | TGGCCCCATT  | GCCCCGGGCC |
|      | ACTCACCCCTG | TCCGACGTAG  | GACACGTGCG | ACCGGGGTAA  | CGGGGGCCGG |
| 1951 | AGATGAGGGA  | GCCCAGGGGC  | TCTGACATTG | CTGGCACCAC  | CTCCACCCTC |
|      | TCTACTCCCT  | CGGGTCCCCG  | AGACTGTAAC | GACCGTGGTG  | GAGGTGGGAG |
| 2001 | CAGGAGCAGA  | TTGGCTGGAT  | GACCAACAAC | CCCCCATCC   | CTGTGGGGGA |
|      | GTCTTCGTCT  | AACCGACCTA  | CTGGTTGTTG | GGGGGGTAGG  | GACACCCCTT |
| 2051 | AATCTACAAG  | AGGTGGATCA  | TCCTGGGCCT | GAACAAGATT  | GTGAGGATGT |
|      | TTAGATGTTT  | TCCACCTAGT  | AGGACCCGGA | CTTGTTCTAA  | CACTCCTACA |
| 2101 | ACTCCCCCAC  | CTCCATCCTG  | GACATCAGGC | AGGGCCCCAA  | GGAGCCCTTC |
|      | TGAGGGGGTG  | GAGGTAGGAC  | CTGTAGTCCG | TCCCGGGGTT  | CCTCGGGAAG |
| 2151 | AGGGACTATG  | TGGACAGGTT  | CTACAAGACC | CTGAGGGCTG  | AGCAGGCCTC |
|      | TCCCTGATAC  | ACCTGTCCAA  | GATGTTCTGG | GACTCCCGAC  | TCGTCCGGAG |
| 2201 | CCAGGAGGTG  | AAGAACTGGA  | TGACAGAGAC | CCTGCTGGTG  | CAGAATGCCA |
|      | GGTCCTCCAC  | TTCTTGACCT  | ACTGTCTCTG | GGACGACCAC  | GTCTTACGGT |
| 2251 | ACCCTGACTG  | CAAGACCATC  | CTGAAGGCC  | TGGGCCCTGC  | TGCCACCCTG |
|      | TGGGACTGAC  | GTTCTGGTAG  | GACTTCCGGG | ACCGGGGACG  | ACGGTGGGAC |
| 2301 | GAGGAGATGA  | TGACAGCCTG  | CCAGGGGGTG | GGGGGCCCTG  | GTCACAAGGC |
|      | CTCCTCTACT  | ACTGTCGGAC  | GGTCCCCCAC | CCCCCGGGAC  | CAGTGTTCCG |
| 2351 | CAGGGTGCTG  | GCTGAGGCCA  | TGTCCCAGGT | GACCAACTCC  | GCCACCATCA |
|      | GTCCCACGAC  | CGACTCCGGT  | ACAGGGTCCA | CTGGTTGAGG  | CGGTGGTAGT |

FIG. 16A-3

|      |             |            |            |            |            |
|------|-------------|------------|------------|------------|------------|
| 2401 | TGATGCAGAG  | GGGCAACTTC | AGGAACCAGA | GGAAGACAGT | GAAGTGCTTC |
|      | ACTACGTCTC  | CCCGTTGAAG | TCCTTGGTCT | CCTTCTGTCA | CTTCACGAAG |
| 2451 | AACTGTGGCA  | AGGTGGGCCA | CATTGCCAAG | AACTGTAGGG | CCCCCAGGAA |
|      | TTGACACCGT  | TCCACCCGGT | GTAACGGTTC | TTGACATCCC | GGGGGTCCTT |
| 2501 | GAAGGGCTGC  | TGGAAGTGTG | GCAAGGAGGG | CCACCAGATG | AAGGACTGCA |
|      | CTTCCCAGCG  | ACCTTCACAC | CGTTCTCTCC | GGTGGTCTAC | TTCTTGACGT |
| 2551 | ATGAGAGGCA  | GGCCAACTTC | CTGGGCCAAA | TCTGGCCCTC | CCACAAGGGC |
|      | TACTCTCCGT  | CCGGTTGAAG | GACCCGTTTT | AGACCGGGAG | GGTGTTCCTG |
| 2601 | AGGCCTGGCA  | ACTTCCTCCA | GTCCAGGCCT | GAGCCCACAG | CCCCTCCCGA |
|      | TCCGGACCGT  | TGAAGGAGGT | CAGGTCCGGA | CTCGGGTGTC | GGGGAGGGCT |
| 2651 | GGAGTCCTTC  | AGGTTTGGGG | AGGAGAAGAC | CACCCCCAGC | CAGAAGCAGG |
|      | CCTCAGGAAG  | TCCAAACCCC | TCCTCTTCTG | GTGGGGGTCG | GTCTTCGTCC |
| 2701 | AGCCCATTTGA | CAAGGAGCTG | TACCCCCTGG | CCTCCCTGAG | GTCCCTGTTT |
|      | TCGGGTAACT  | GTTCTCTGAC | ATGGGGGACC | GGAGGGACTC | CAGGGACAAA |
| 2751 | GGCAACGACC  | CCTCCTCCCA | GTAAAATAAA | GCCCGGGCAG | ATCTGCTGTG |
|      | CCGTTGCTGG  | GGAGGAGGGT | CATTTTATTT | CGGGCCCCGC | TAGACGACAC |
| 2801 | CCTTCTAGTT  | GCCAGCCATC | TGTTGTTTGC | CCCTCCCCCG | TGCCTTCCTT |
|      | GGAAGATCAA  | CGGTCGGTAG | ACAACAAACG | GGGAGGGGGC | ACGGAAGGAA |
| 2851 | GACCCCTGGAA | GGTGCCACTC | CCACTGTCCT | TTCTAATAAA | AATGAGGAAA |
|      | CTGGGACCTT  | CCACGGTGAG | GGTGACAGGA | AAGGATTATT | TTACTCCTTT |
| 2901 | TTGCATCGCA  | TTGTCTGAGT | AGGTGTCATT | CTATTCTGGG | GGGTGGGGTG |
|      | AACGTAGCGT  | AACAGACTCA | TCCACAGTAA | GATAAGACCC | CCCACCCAC  |
| 2951 | GGGCAGGACA  | GCAAGGGGGA | GGATTGGGAA | GACAATAGCA | GGCATGCTGG |
|      | CCCGTCCTGT  | CGTTCCCCCT | CCTAACCCCT | CTGTTATCGT | CCGTACGACC |
| 3001 | GGATGCGGTG  | GGCTCTATGG | CCGATCGGCG | CGCCGTACTG | AAATGTGTGG |
|      | CCTACGCCAC  | CCGAGATACC | GGCTAGCCGC | GCGGCATGAC | TTTACACACC |
| 3051 | GCGTGGCTTA  | AGGGTGGGAA | AGAATATATA | AGGTGGGGGT | CTTATGTAGT |
|      | CGCACC GAAT | TCCCACCCTT | TCTTATATAT | TCCACCCCCA | GAATACATCA |
| 3101 | TTTGTATCTG  | TTTTGCAGCA | GCCGCCGCCG | CCATGAGCAC | CAACTCGTTT |
|      | AAACATAGAC  | AAAACGTCGT | CGGCGGCGGC | GGTACTCGTG | GTTGAGCAAA |
| 3151 | GATGGAAGCA  | TTGTGAGCTC | ATATTTGACA | ACGCGCATGC | CCCCATGGGC |
|      | CTACCTTCGT  | AACACTCGAG | TATAAACTGT | TGCGCGTACG | GGGGTACCCG |

FIG. 16A-4

|      |            |            |            |             |             |
|------|------------|------------|------------|-------------|-------------|
| 3201 | CGGGGTGCGT | CAGAATGTGA | TGGGCTCCAG | CATTGATGGT  | CGCCCCGTCC  |
|      | GCCCCACGCA | GTCTTACACT | ACCCGAGGTC | GTAAC TACCA | GCGGGGCAGG  |
| 3251 | TGCCCCGAAA | CTCTACTACC | TTGACCTACG | AGACCGTGTC  | TGGAACGCCG  |
|      | ACGGGCGTTT | GAGATGATGG | AACTGGATGC | TCTGGCACAG  | ACCTTGCGGC  |
| 3301 | TTGGAGACTG | CAGCCTCCGC | CGCCGCTTCA | GCCGCTGCAG  | CCACCGCCCCG |
|      | AACCTCTGAC | GTCGGAGGCG | GCGGCGAAGT | CGGCGACGTC  | GGTGGCGGGC  |
| 3351 | CGGGATTGTG | ACTGACTTTG | CTTTCCTGAG | CCCGCTTGCA  | AACAGTGCAG  |
|      | GCCCTAACAC | TGACTGAAAC | GAAAGGACTC | GGGCGAACGT  | TTGTCACGTC  |
| 3401 | CTTCCCGTTC | ATCCGCCCCG | GATGACAAGT | TGACGGCTCT  | TTTGGCACAA  |
|      | GAAGGGCAAG | TAGGCGGGCG | CTACTGTTCA | ACTGCCGAGA  | AAACCGTGTT  |
| 3451 | TTGGATTCTT | TGACCCGGGA | ACTTAATGTC | GTTTCTCAGC  | AGCTGTTGGA  |
|      | AACCTAAGAA | ACTGGGCCCT | TGAATTACAG | CAAAGAGTCG  | TCGACAACCT  |
| 3501 | TCTGCGCCAG | CAGGTTTCTG | CCCTGAAGGC | TTCCTCCCCT  | CCCAATGCGG  |
|      | AGACGCGGTC | GTCCAAAGAC | GGGACTTCCG | AAGGAGGGGA  | GGGTTACGCC  |
| 3551 | TTTAAAACAT | AAATAAAAAA | CCAGACTCTG | TTTGGATTTG  | GATCAAGCAA  |
|      | AAATTTTGTA | TTTATTTTTT | GGTCTGAGAC | AAACCTAAAC  | CTAGTTCGTT  |
| 3601 | GTGTCTTGCT | GTCTTTATTT | AGGGGTTTTG | CGCGCGCGGT  | AGGCCCGGGA  |
|      | CACAGAACGA | CAGAAATAAA | TCCCCAAAAC | GCGCGCGCCA  | TCCGGGCCCT  |
| 3651 | CCAGCGGTCT | CGGTCGTTGA | GGGTCTGTG  | TATTTTTTCC  | AGGACGTGGT  |
|      | GGTCGCCAGA | GCCAGCAACT | CCCAGGACAC | ATAAAAAAGG  | TCCTGCACCA  |
| 3701 | AAAGGTGACT | CTGGATGTTT | AGATACATGG | GCATAAGCCC  | GTCTCTGGGG  |
|      | TTTCCACTGA | GACCTACAAG | TCTATGTACC | CGTATTCGGG  | CAGAGACCCC  |
| 3751 | TGGAGGTAGC | ACCACTGCAG | AGCTTCATGC | TGCGGGGTGG  | TGTTGTAGAT  |
|      | ACCTCCATCG | TGGTGACGTC | TCGAAGTACG | ACGCCCCACC  | ACAACATCTA  |
| 3801 | GATCCAGTCG | TAGCAGGAGC | GCTGGGCGTG | GTGCCTAAAA  | ATGTCTTTCA  |
|      | CTAGGTCAGC | ATCGTCCTCG | CGACCCGCAC | CACGGATTTT  | TACAGAAAGT  |
| 3851 | GTAGCAAGCT | GATTGCCAGG | GGCAGGCCCT | TGGTGTAAGT  | GTTTACAAAG  |
|      | CATCGTTTCA | CTAACGGTCC | CCGTCCGGGA | ACCACATTCA  | CAAATGTTTC  |
| 3901 | CGGTTAAGCT | GGGATGGGTG | CATACGTGGG | GATATGAGAT  | GCATCTTGGA  |
|      | GCCAATTTCG | CCCTACCCAC | GTATGCACCC | CTATACTCTA  | CGTAGAACCT  |
| 3951 | CTGTATTTTT | AGGTTGGCTA | TGTTCCCAGC | CATATCCCTC  | CGGGGATTCA  |
|      | GACATAAAAA | TCCAACCGAT | ACAAGGGTGC | GTATAGGGAG  | GCCCCAAGT   |

FIG. 16A-5

|      |             |             |             |             |            |
|------|-------------|-------------|-------------|-------------|------------|
| 4001 | TGTTGTGCAG  | AACCACCAGC  | ACAGTGTATC  | CGGTGCACTT  | GGGAAATTTG |
|      | ACAACACGTC  | TTGGTGGTCG  | TGTCACATAG  | GCCACGTGAA  | CCCTTTAAAC |
| 4051 | TCATGTAGCT  | TAGAAGGAAA  | TGCGTGGAAG  | AACTTGGAGA  | CGCCCTTGTG |
|      | AGTACATCGA  | ATCTTCCTTT  | ACGCACCTTC  | TTGAACCTCT  | GCGGGAACAC |
| 4101 | ACCTCCAAGA  | TTTTCCATGC  | ATTCGTCCAT  | AATGATGGCA  | ATGGGCCCAC |
|      | TGGAGGTTCT  | AAAAGGTACG  | TAAGCAGGTA  | TTACTACCGT  | TACCCGGGTG |
| 4151 | GGGCGGCGGC  | CTGGGCGAAG  | ATATTTCTGG  | GATCACTAAC  | GTCATAGTTG |
|      | CCCGCCGCCG  | GACCCGCTTC  | TATAAAGACC  | CTAGTGATTG  | CAGTATCAAC |
| 4201 | TGTTCCAGGA  | TGAGATCGTC  | ATAGGCCATT  | TTTACAAAGC  | GCGGGCGGAG |
|      | ACAAGGTCCT  | ACTCTAGCAG  | TATCCGGTAA  | AAATGTTTCG  | CGCCCGCCTC |
| 4251 | GGTGCCAGAC  | TGCGGTATAA  | TGGTTCCATC  | CGGCCCAGGG  | GCGTAGTTAC |
|      | CCACGGTCTG  | ACGCCATATT  | ACCAAGGTAG  | GCCGGGTCCC  | CGCATCAATG |
| 4301 | CCTCACAGAT  | TTGCATTTCC  | CACGCTTTGA  | G TTCAGATGG | GGGGATCATG |
|      | GGAGTG TCTA | AACGTAAAGG  | GTGCGAAACT  | CAAGTCTACC  | CCCCTAGTAC |
| 4351 | TCTACCTGCG  | GGGCGATGAA  | GAAAACGGTT  | TCCGGGGTAG  | GGGAGATCAG |
|      | AGATGGACGC  | CCCGCTACTT  | CTTTTGCCAA  | AGGCCCCATC  | CCCTCTAGTC |
| 4401 | CTGGGAAGAA  | AGCAGGTTCC  | TGAGCAGCTG  | C GACTTACCG | CAGCCGGTGG |
|      | GACCCTTCTT  | TCGTCCAAGG  | ACTCGTCGAC  | GCTGAATGGC  | GTCGGCCACC |
| 4451 | GCCCGTAAAT  | CACACCTATT  | ACCGGCTGCA  | ACTGGTAGTT  | AAGAGAGCTG |
|      | CGGGCATT TA | GTGTGGATAA  | TGGCCGACGT  | TGACCATCAA  | TTCTCTCGAC |
| 4501 | CAGCTGCCGT  | CATCCCTGAG  | CAGGGGGGCC  | ACTTCGTTAA  | GCATGTCCCT |
|      | GTCGACGGCA  | G TAGGGACTC | GTCCCCCGG   | TGAAGCAATT  | CGTACAGGGA |
| 4551 | GACTCGCATG  | TTTTCCCTGA  | CCAAATCCGC  | CAGAAGGCGC  | TCGCCGCCCA |
|      | CTGAGCGTAC  | AAAAGGGACT  | GGTTTAGGCG  | GTCTTCGCGC  | AGCGGCGGGT |
| 4601 | GCGATAGCAG  | TTCTTGCAAG  | GAAGCAAAGT  | TTTTCAACGG  | TTTGAGACCG |
|      | CGCTATCGTC  | AAGAACGTTT  | CTTCGTTTCA  | AAAAGTTGCC  | AAACTCTGGC |
| 4651 | TCCGCCGTAG  | GCATGCTTTT  | GAGCGTTTGA  | CCAAGCAGTT  | CCAGGCGGTC |
|      | AGGCGGCATC  | CGTACGAAAA  | CTCGCAA ACT | GGTTCGTCAA  | GGTCCGCCAG |
| 4701 | CCACAGCTCG  | GTCACCTGCT  | CTACGGCATC  | TCGATCCAGC  | ATATCTCCTC |
|      | GGTGTCGAGC  | CAGTGGACGA  | GATGCCGTAG  | AGCTAGGTCG  | TATAGAGGAG |
| 4751 | GTTTCGCGGG  | TTGGGGCGGC  | TTTCGCTGTA  | CGGCAGTAGT  | CGGTGCTCGT |
|      | CAAAGCGCCC  | AACCCCGCCG  | AAAGCGACAT  | GCCGTCATCA  | GCCACGAGCA |

FIG. 16A-6

|      |            |             |            |             |            |
|------|------------|-------------|------------|-------------|------------|
| 4801 | CCAGACGGGC | CAGGGTCATG  | TCTTTCCACG | GGCGCAGGGT  | CCTCGTCAGC |
|      | GGTCTGCCCC | GTCCCAGTAC  | AGAAAGGTGC | CCGCGTCCCA  | GGAGCAGTCG |
| 4851 | GTAGTCTGGG | TCACGGTGAA  | GGGGTGCGCT | CCGGGCTGCG  | CGCTGGCCAG |
|      | CATCAGACCC | AGTGCCACTT  | CCCCACGCGA | GGCCCGACGC  | GCGACCGGTC |
| 4901 | GGTGCGCTTG | AGGCTGGTCC  | TGCTGGTGCT | GAAGCGCTGC  | CGGTCTTCGC |
|      | CCACGCGAAC | TCCGACCAGG  | ACGACCACGA | CTTCGCGACG  | GCCAGAAGCG |
| 4951 | CCTGCGCGTC | GGCCAGGTAG  | CATTTGACCA | TGGTGTGATA  | GTCCAGCCCC |
|      | GGACGCGCAG | CCGGTCCATC  | GTAAACTGGT | ACCACAGTAT  | CAGGTCGGGG |
| 5001 | TCCGCGGCGT | GGCCCTTGGC  | GCGCAGCTTG | CCCTTGAGAG  | AGGCGCCGCA |
|      | AGGCGCCGCA | CCGGGAACCG  | CGCGTCGAAC | GGGAACCTCC  | TCCGCGGCGT |
| 5051 | CGAGGGGCAG | TGCAGACTTT  | TGAGGGCGTA | GAGCTTGGGC  | GCGAGAAATA |
|      | GCTCCCCGTC | ACGTCTGAAA  | ACTCCCGCAT | CTCGAACC CG | CGCTCTTTAT |
| 5101 | CCGATTCCGG | GGAGTAGGCA  | TCCGCGCCGC | AGGCCCCGCA  | GACGGTCTCG |
|      | GGCTAAGGCC | CCTCATCCGT  | AGGCGCGGCG | TCCGGGGCGT  | CTGCCAGAGC |
| 5151 | CATTCCACGA | GCCAGGTGAG  | CTCTGGCCGT | TCGGGGTCAA  | AAACCAGGTT |
|      | GTAAGGTGCT | CGGTCCACTC  | GAGACCGGCA | AGCCCCAGTT  | TTTGGTCCAA |
| 5201 | TCCCCCATGC | TTTTTGATGC  | GTTTCTTACC | TCTGGTTTCC  | ATGAGCCGGT |
|      | AGGGGGTACG | AAAAACTACG  | CAAAGAATGG | AGACCAAAGG  | TACTCGGCCA |
| 5251 | GTCCACGCTC | GGTGACGAAA  | AGGCTGTCCG | TGTCCCCGTA  | TACAGACTTG |
|      | CAGGTGCGAG | CCACTGCTTT  | TCCGACAGGC | ACAGGGGCAT  | ATGTCTGAAC |
| 5301 | AGAGGCCTGT | CCTCGAGCGG  | TGTTCCGCGG | TCCTCCTCGT  | ATAGAACTC  |
|      | TCTCCGGACA | GGAGCTCGCC  | ACAAGGCGCC | AGGAGGAGCA  | TATCTTTGAG |
| 5351 | GGACCACTCT | GAGACAAAGG  | CTCGCGTCCA | GGCCAGCACG  | AAGGAGGCTA |
|      | CCTGGTGAGA | CTCTGTTTCC  | GAGCGCAGGT | CCGGTCGTGC  | TTCTTCCGAT |
| 5401 | AGTGGGAGGG | GTAGCGGTGCG | TTGTCCACTA | GGGGGTCCAC  | TCGCTCCAGG |
|      | TCACCCTCCC | CATCGCCAGC  | AACAGGTGAT | CCCCCAGGTG  | AGCGAGGTCC |
| 5451 | GTGTGAAGAC | ACATGTCGCC  | CTCTTCGGCA | TCAAGGAAGG  | TGATTGGTTT |
|      | CACACTTCTG | TGTACAGCGG  | GAGAAGCCGT | AGTTCCTTCC  | ACTAACCAA  |
| 5501 | GTAGGTGTAG | GCCACGTGAC  | CGGGTGTTCC | TGAAGGGGGG  | CTATAAAAGG |
|      | CATCCACATC | CGGTGCACTG  | GCCCACAAGG | ACTTCCCCCC  | GATATTTTCC |
| 5551 | GGGTGGGGGC | GCGTTCGTCC  | TCACTCTCTT | CCGCATCGCT  | GTCTGCGAGG |
|      | CCCACCCCCG | CGCAAGCAGG  | AGTGAGAGAA | GGCGTAGCGA  | CAGACGCTCC |

FIG. 16A-7



|      |            |            |            |            |            |
|------|------------|------------|------------|------------|------------|
| 5601 | GCCAGCTGTT | GGGGTGAGTA | CTCCCTCTGA | AAAGCGGGCA | TGACTTCTGC |
|      | CGGTCGACAA | CCCCACTCAT | GAGGGAGACT | TTTCGCCCCG | ACTGAAGACG |
| 5651 | GCTAAGATTG | TCAGTTTCCA | AAAACGAGGA | GGATTTGATA | TTCACCTGGC |
|      | CGATTCTAAC | AGTCAAAGGT | TTTTGCTCCT | CCTAAACTAT | AAGTGGACCG |
| 5701 | CCGCGGTGAT | GCCTTTGAGG | GTGGCCGCAT | CCATCTGGTC | AGAAAAGACA |
|      | GGCGCCACTA | CGGAAACTCC | CACCGGCGTA | GGTAGACCAG | TCTTTTCTGT |
| 5751 | ATCTTTTTGT | TGTCAAGCTT | GGTGGCAAAC | GACCCGTAGA | GGGCGTTGGA |
|      | TAGAAAAACA | ACAGTTCGAA | CCACCGTTTG | CTGGGCATCT | CCCGCAACCT |
| 5801 | CAGCAACTTG | GCGATGGAGC | GCAGGGTTTG | GTTTTTGTCG | CGATCGGCGC |
|      | GTCGTTGAAC | CGCTACCTCG | CGTCCCAAAC | CAAAAACAGC | GCTAGCCGCG |
| 5851 | GCTCCTTGGC | CGCGATGTTT | AGCTGCACGT | ATTCGCGCGC | AACGCACCGC |
|      | CGAGGAACCG | GCGCTACAAA | TCGACGTGCA | TAAGCGCGCG | TTGCGTGGCG |
| 5901 | CATTCGGGAA | AGACGGTGGT | GCGCTCGTCG | GGCACCAGGT | GCACGCGCCA |
|      | GTAAGCCCTT | TCTGCCACCA | CGCGAGCAGC | CCGTGGTCCA | CGTGCGCGGT |
| 5951 | ACCGCGGTTG | TGCAGGGTGA | CAAGGTCAAC | GCTGGTGGCT | ACCTCTCCGC |
|      | TGGCGCCAAC | ACGTCCCCT  | GTTCCAGTTG | CGACCACCGA | TGGAGAGGCG |
| 6001 | GTAGGCGCTC | GTTGGTCCAG | CAGAGGCGGC | CGCCCTTGCG | CGAGCAGAAT |
|      | CATCCGCGAG | CAACCAGGTC | GTCTCCGCCG | GCGGGAACGC | GCTCGTCTTA |
| 6051 | GGCGGTAGGG | GGTCTAGCTG | CGTCTCGTCC | GGGGGGTCTG | CGTCCACGGT |
|      | CCGCCATCCC | CCAGATCGAC | GCAGAGCAGG | CCCCCAGAC  | GCAGGTGCCA |
| 6101 | AAAGACCCCG | GGCAGCAGGC | GCGCGTCGAA | GTAGTCTATC | TTGCATCCTT |
|      | TTTCTGGGGC | CCGTCGTCCG | CGCGCAGCTT | CATCAGATAG | AACGTAGGAA |
| 6151 | GCAAGTCTAG | CGCCTGCTGC | CATGCGCGGG | CGGCAAGCGC | GCGCTCGTAT |
|      | CGTTCAGATC | GCGGACGACG | GTACGCGCCC | GCCGTTTCGC | CGCGAGCATA |
| 6201 | GGGTTGAGTG | GGGGACCCCA | TGGCATGGGG | TGGGTGAGCG | CGGAGGCGTA |
|      | CCCAACTCAC | CCCCTGGGGT | ACCGTACCCC | ACCCACTCGC | GCCTCCGCAT |
| 6251 | CATGCCGCAA | ATGTCGTAAA | CGTAGAGGGG | CTCTCTGAGT | ATTCCAAGAT |
|      | GTACGGCGTT | TACAGCATTT | GCATCTCCCC | GAGAGACTCA | TAAGGTTCTA |
| 6301 | ATGTAGGGTA | GCATCTTCCA | CCGCGGATGC | TGGCGCGCAC | GTAATCGTAT |
|      | TACATCCCAT | CGTAGAAGGT | GGCGCCTACG | ACCGCGCGTG | CATTAGCATA |
| 6351 | AGTTCGTGCG | AGGGAGCGAG | GAGGTCGGGA | CCGAGGTTGC | TACGGGCGGG |
|      | TCAAGCACGC | TCCCTCGCTC | CTCCAGCCCT | GGCTCCAACG | ATGCCCCGCC |

FIG. 16A-8

|      |             |            |             |            |            |
|------|-------------|------------|-------------|------------|------------|
| 6401 | CTGCTCTGCT  | CGGAAGACTA | TCTGCCTGAA  | GATGGCATGT | GAGTTGGATG |
|      | GACGAGACGA  | GCCTTCTGAT | AGACGGACTT  | CTACCGTACA | CTCAACCTAC |
| 6451 | ATATGGTTGG  | ACGCTGGAAG | ACGTTGAAGC  | TGGCGTCTGT | GAGACCTACC |
|      | TATACCAACC  | TGCGACCTTC | TGCAACTTCG  | ACCGCAGACA | CTCTGGATGG |
| 6501 | GCGTCACGCA  | CGAAGGAGGC | GTAGGAGTCG  | CGCAGCTTGT | TGACCAGCTC |
|      | CGCAGTGCGT  | GCTTCCTCCG | CATCCTCAGC  | GCGTCGAACA | ACTGGTCGAG |
| 6551 | GGCGGTGACC  | TGCACGTCTA | GGGCGCAGTA  | GTCCAGGGTT | TCCTTGATGA |
|      | CCGCCACTGG  | ACGTGCAGAT | CCCGCGTCAT  | CAGGTCCCAA | AGGAACTACT |
| 6601 | TGTCATACTT  | ATCCTGTCCC | TTTTTTTTTCC | ACAGCTCGCG | GTTGAGGACA |
|      | ACAGTATGAA  | TAGGACAGGG | AAAAAAAAGG  | TGTCGAGCGC | CAACTCCTGT |
| 6651 | AACTCTTCGC  | GGTCTTTCCA | GTACTCTTGG  | ATCGGAAACC | CGTCGGCCTC |
|      | TTGAGAAGCG  | CCAGAAAGGT | CATGAGAACC  | TAGCCTTTGG | GCAGCCGGAG |
| 6701 | CGAACGGTAA  | GAGCCTAGCA | TGTAGAACTG  | GTTGACGGCC | TGGTAGGCGC |
|      | GCTTGCCATT  | CTCGGATCGT | ACATCTTGAC  | CAACTGCCGG | ACCATCCGCG |
| 6751 | AGCATCCCTT  | TTCTACGGGT | AGCGCGTATG  | CCTGCGCGGC | CTTCCGGAGC |
|      | TCGTAGGGAA  | AAGATGCCCA | TCGCGCATAC  | GGACGCGCCG | GAAGGCCTCG |
| 6801 | GAGGTGTGGG  | TGAGCGCAAA | GGTGTCCCTG  | ACCATGACTT | TGAGGTACTG |
|      | CTCCACACCC  | ACTCGCGTTT | CCACAGGGAC  | TGGTACTGAA | ACTCCATGAC |
| 6851 | GTAATTTGAAG | TCAGTGTCTG | CGCATCCGCC  | CTGCTCCCAG | AGCAAAAAGT |
|      | CATAAACTTC  | AGTCACAGCA | GCGTAGGCGG  | GACGAGGGTC | TCGTTTTTCA |
| 6901 | CCGTGCGCTT  | TTTGGAACGC | GGATTGCGCA  | GGGCGAAGGT | GACATCGTTG |
|      | GGCACGCGAA  | AAACCTTGCG | CCTAAACCGT  | CCCGCTTCCA | CTGTAGCAAC |
| 6951 | AAGAGTATCT  | TTCCCGCGCG | AGGCATAAAG  | TTGCGTGTGA | TGCGGAAGGG |
|      | TTCTCATAGA  | AAGGGCGCGC | TCCGTATTTT  | AACGCACACT | ACGCCTTCCC |
| 7001 | TCCCGGCACC  | TCGGAACGGT | TGTTAATTAC  | CTGGGCGGCG | AGCACGATCT |
|      | AGGGCCGTGG  | AGCCTTGCCA | ACAATTAATG  | GACCCGCCGC | TCGTGCTAGA |
| 7051 | CGTCAAAGCC  | GTTGATGTTG | TGGCCACAA   | TGTAAAGTTC | CAAGAAGCGC |
|      | GCAGTTTCGG  | CAACTACAAC | ACCGGGTGT   | ACATTTCAAG | GTTCTTCGCG |
| 7101 | GGGATGCCCT  | TGATGGAAGG | CAATTTTTTT  | AGTTCCTCGT | AGGTGAGCTC |
|      | CCCTACGGGA  | ACTACCTTCC | GTTAAAAAAT  | TCAAGGAGCA | TCCACTCGAG |
| 7151 | TTCAGGGGAG  | CTGAGCCCGT | GCTCTGAAAG  | GGCCAGTCT  | GCAAGATGAG |
|      | AAGTCCCCTC  | GACTCGGGCA | CGAGACTTTC  | CCGGGTCAGA | CGTTCTACTC |

FIG. 16A-9

|      |            |            |            |            |            |
|------|------------|------------|------------|------------|------------|
| 7201 | GGTTGGAAGC | GACGAATGAG | CTCCACAGGT | CACGGGCCAT | TAGCATTTGC |
|      | CCAACCTTCG | CTGCTTACTC | GAGGTGTCCA | GTGCCCGGTA | ATCGTAAACG |
| 7251 | AGGTGGTCGC | GAAAGGTCCT | AAACTGGCGA | CCTATGGCCA | TTTTTTCTGG |
|      | TCCACCAGCG | CTTTCCAGGA | TTTGACCGCT | GGATACCGGT | AAAAAAGACC |
| 7301 | GGTGATGCAG | TAGAAGGTAA | GCGGGTCTTG | TTCCCAGCGG | TCCCATCCAA |
|      | CCACTACGTC | ATCTTCCATT | CGCCCAGAAC | AAGGGTCGCC | AGGGTAGGTT |
| 7351 | GGTTCGCGGC | TAGGTCTCGC | GCGGCAGTCA | CTAGAGGCTC | ATCTCCGCCG |
|      | CCAAGCGCCG | ATCCAGAGCG | CGCCGTCAGT | GATCTCCGAG | TAGAGGCGGC |
| 7401 | AACTTCATGA | CCAGCATGAA | GGGCACGAGC | TGCTTCCCAA | AGGCCCCCAT |
|      | TTGAAGTACT | GGTCGTACTT | CCCGTGCTCG | ACGAAGGGTT | TCCGGGGGTA |
| 7451 | CCAAGTATAG | GTCTCTACAT | CGTAGGTGAC | AAAGAGACGC | TCGGTGCGAG |
|      | GGTTCATATC | CAGAGATGTA | GCATCCACTG | TTTCTCTGCG | AGCCACGCTC |
| 7501 | GATGCGAGCC | GATCGGGAAG | AACTGGATCT | CCCGCCACCA | ATTGGAGGAG |
|      | CTACGCTCGG | CTAGCCCTTC | TTGACCTAGA | GGGCGGTGGT | TAACCTCCTC |
| 7551 | TGGCTATTGA | TGTGGTGAAA | GTAGAAGTCC | CTGCGACGGG | CCGAACACTC |
|      | ACCGATAACT | ACACCACTTT | CATCTTCAGG | GACGCTGCCC | GGCTTGTGAG |
| 7601 | GTGCTGGCTT | TTGTAAAAAC | GTGCGCAGTA | CTGGCAGCGG | TGCACGGGCT |
|      | CACGACCGAA | AACATTTTTG | CACGCGTCAT | GACCGTCGCC | ACGTGCCCCG |
| 7651 | GTACATCCTG | CACGAGGTTG | ACCTGACGAC | CGCGCACAAG | GAAGCAGAGT |
|      | CATGTAGGAC | GTGCTCCAAC | TGGACTGCTG | GCGCGTGTTT | CTTCGTCTCA |
| 7701 | GGGAATTTGA | GCCCCTCGCC | TGGCGGGTTT | GGCTGGTGGT | CTTCTACTTC |
|      | CCCTTAAACT | CGGGGAGCGG | ACCGCCCAA  | CCGACCACCA | GAAGATGAAG |
| 7751 | GGCTGCTTGT | CCTTGACCGT | CTGGCTGCTC | GAGGGGAGTT | ACGGTGGATC |
|      | CCGACGAACA | GGAAGTGGCA | GACCGACGAG | CTCCCTCAA  | TGCCACCTAG |
| 7801 | GGACCACCAC | GCCGCGCGAG | CCCAAAGTCC | AGATGTCCGC | GCGCGGCGGT |
|      | CCTGGTGGTG | CGGCGCGCTC | GGGTTTCAGG | TCTACAGGCG | CGCGCCGCCA |
| 7851 | CGGAGCTTGA | TGACAACATC | GCGCAGATGG | GAGCTGTCCA | TGGTCTGGAG |
|      | GCCTCGAACT | ACTGTTGTAG | CGCGTCTACC | CTCGACAGGT | ACCAGACCTC |
| 7901 | CTCCCGCGGC | GTCAGGTCAG | GCGGGAGCTC | CTGCAGGTTT | ACCTCGCATA |
|      | GAGGGCGCCG | CAGTCCAGTC | CGCCCTCGAG | GACGTCCAAA | TGGAGCGTAT |
| 7951 | GACGGGTCAG | GGCGCGGGCT | AGATCCAGGT | GATACCTAAT | TTCCAGGGGC |
|      | CTGCCAGTC  | CCGCGCCCGA | TCTAGGTCCA | CTATGGATTA | AAGGTCCCCG |

FIG. 16A-10

|      |                          |                          |                          |                           |                           |
|------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
| 8001 | TGGTTGGTGG<br>ACCAACCACC | CGGCGTCGAT<br>GCCGCAGCTA | GGCTTGCAAG<br>CCGAACGTTC | AGGCCGCATC<br>TCCGGCGTAG  | CCCGCGGCGC<br>GGGCGCCGCG  |
| 8051 | GACTACGGTA<br>CTGATGCCAT | CCGCGCGGGC<br>GGCGCGCCGC | GGCGGTGGGC<br>CCGCCACCCG | CGCGGGGGTG<br>GCGCCCCAC   | TCCTTGATG<br>AGGAACCTAC   |
| 8101 | ATGCATCTAA<br>TACGTAGATT | AAGCGGTGAC<br>TTCGCCACTG | GCGGGCGAGC<br>CGCCCGCTCG | CCCCGGAGGT<br>GGGGCCTCCA  | AGGGGGGGCT<br>TCCCCCCCCG  |
| 8151 | CCGGACCCGC<br>GGCCTGGGCG | CGGGAGAGGG<br>GCCCTCTCCC | GGCAGGGGCA<br>CCGTCCCCGT | CGTCGGCGCC<br>GCAGCCGCGG  | GCGCGCGGGC<br>CGCGCGCCCG  |
| 8201 | AGGAGCTGGT<br>TCCTCGACCA | GCTGCGCGCG<br>CGACGCGCGC | TAGGTTGCTG<br>ATCCAACGAC | GCGAACGCGA<br>CGCTTGCGCT  | CGACGCGGGC<br>GCTGCGCCGC  |
| 8251 | GTTGATCTCC<br>CAACTAGAGG | TGAATCTGGC<br>ACTTAGACCG | GCCTCTGCGT<br>CGGAGACGCA | GAAGACGACG<br>CTTCTGCTGC  | GGCCCGGTGA<br>CCGGGCCACT  |
| 8301 | GCTTGAACCT<br>CGAACTTGGA | GAAAGAGAGT<br>CTTTCTCTCA | TCGACAGAAT<br>AGCTGTCTTA | CAATTTCTGGT<br>GTTAAAGCCA | GTCGTTGACG<br>CAGCAACTGC  |
| 8351 | GCGGCCTGGC<br>CGCCGGACCG | GCAAAATCTC<br>CGTTTTAGAG | CTGCACGTCT<br>GACGTGCAGA | CCTGAGTTGT<br>GGACTCAACA  | CTTGATAGGC<br>GAACTATCCG  |
| 8401 | GATCTCGGCC<br>CTAGAGCCGG | ATGAACTGCT<br>TACTTGACGA | CGATCTCTTC<br>GCTAGAGAAG | CTCCTGGAGA<br>GAGGACCTCT  | TCTCCGCGTC<br>AGAGGCGCAG  |
| 8451 | CGGCTCGCTC<br>GCCGAGCGAG | CACGGTGCGC<br>GTGCCACCGC | GCGAGGTCGT<br>CGCTCCAGCA | TGGAAATGCG<br>ACCTTTACGC  | GGCCATGAGC<br>CCGGTACTCG  |
| 8501 | TGCGAGAAGG<br>ACGCTCTTCC | CGTTGAGGCC<br>GCAACTCCGG | TCCCTCGTTC<br>AGGGAGCAAG | CAGACGCGGC<br>GTCTGCGCCG  | TGTAGACCAC<br>ACATCTGGTG  |
| 8551 | GCCCCCTTCG<br>CGGGGGAAGC | GCATCGCGGG<br>CGTAGCGCCC | CGCGCATGAC<br>GCGCGTACTG | CACCTGCGCG<br>GTGGACGCGC  | AGATTGAGCT<br>TCTAACTCGA  |
| 8601 | CCACGTGCCG<br>GGTGCACGGC | GGCGAAGACG<br>CCGCTTCTGC | GCGTAGTTTC<br>CGCATCAAAG | GCAGGCGCTG<br>CGTCCGCGAC  | AAAGAGGTTAG<br>TTTCTCCATC |
| 8651 | TTGAGGGTGG<br>AACTCCCACC | TGGCGGTGTG<br>ACCGCCACAC | TTCTGCCACG<br>AAGACGGTGC | AAGAAGTACA<br>TTCTTCATGT  | TAACCCAGCG<br>ATTGGGTGCG  |
| 8701 | TCGCAACGTG<br>AGCGTTGCAC | GATTCGTTGA<br>CTAAGCAACT | TATCCCCCAA<br>ATAGGGGGTT | GGCCTCAAGG<br>CCGGAGTTCC  | CGCTCCATGG<br>GCGAGGTACC  |
| 8751 | CCTCGTAGAA<br>GGAGCATCTT | GTCCACGGCG<br>CAGGTGCCGC | AAGTTGAAAA<br>TTCAACTTTT | ACTGGGAGTT<br>TGACCCTCAA  | GCGCGCCGAC<br>CGCGCGGCTG  |

FIG. 16A-11

|      |            |            |            |            |            |
|------|------------|------------|------------|------------|------------|
| 8801 | ACGGTTAACT | CCTCCTCCAG | AAGACGGATG | AGCTCGGCGA | CAGTGTGCGG |
|      | TGCCAATTGA | GGAGGAGGTC | TTCTGCCTAC | TCGAGCCGCT | GTCACAGCGC |
| 8851 | CACCTCGCGC | TCAAAGGCTA | CAGGGGCCTC | TTCTTCTTCT | TCAATCTCCT |
|      | GTGGAGCGCG | AGTTTCCGAT | GTCCCCGGAG | AAGAAGAAGA | AGTTAGAGGA |
| 8901 | CTTCCATAAG | GGCCTCCCCT | TCTTCTTCTT | CTGGCGGCGG | TGGGGGAGGG |
|      | GAAGGTATTG | CCGGAGGGGA | AGAAGAAGAA | GACCGCCGCC | ACCCCCTCCC |
| 8951 | GGGACACGGC | GGCGACGACG | GCGCACCGGG | AGGCGGTCTA | CAAAGCGCTC |
|      | CCCTGTGCCG | CCGCTGCTGC | CGCGTGGCCC | TCCGCCAGCT | GTTTCGCGAG |
| 9001 | GATCATCTCC | CCGCGGCGAC | GGCGCATGGT | CTCGGTGACG | GCGCGGCCGT |
|      | CTAGTAGAGG | GGCGCCGCTG | CCGCGTACCA | GAGCCACTGC | CGCGCCGGCA |
| 9051 | TCTCGCGGGG | GCGCAGTTGG | AAGACGCCGC | CCGTCATGTC | CCGGTTATGG |
|      | AGAGCGCCCC | CGCGTCAACC | TTCTGCGGCG | GGCAGTACAG | GGCCAATACC |
| 9101 | GTTGGCGGGG | GGCTGCCATG | CGGCAGGGAT | ACGGCGCTAA | CGATGCATCT |
|      | CAACCGCCCC | CCGACGGTAC | GCCGTCCCTA | TGCCGCGATT | GCTACGTAGA |
| 9151 | CAACAATTGT | TGTGTAGGTA | CTCCGCCGCC | GAGGGACCTG | AGCGAGTCCG |
|      | GTTGTTAACA | ACACATCCAT | GAGGCGGCGG | CTCCCTGGAC | TCGCTCAGGC |
| 9201 | CATCGACCGG | ATCGGAAAAC | CTCTCGAGAA | AGGCGTCTAA | CCAGTCACAG |
|      | GTAGCTGGCC | TAGCCTTTTG | GAGAGCTCTT | TCCGCAGATT | GGTCAGTGTC |
| 9251 | TCGCAAGGTA | GGCTGAGCAC | CGTGGCGGGC | GGCAGCGGGC | GGCGGTGCGG |
|      | AGCGTTCCAT | CCGACTCGTG | GCACCGCCCC | CCGTCGCCCC | CCGCCAGCCC |
| 9301 | GTTGTTTCTG | GCGGAGGTGC | TGCTGATGAT | GTAATTAAAG | TAGGCGGTCT |
|      | CAACAAAGAC | CGCCTCCACG | ACGACTACTA | CATTAATTTT | ATCCGCCAGA |
| 9351 | TGAGACGGCG | GATGGTCGAC | AGAAGCACCA | TGTCCTTGGG | TCCGGCCTGC |
|      | ACTCTGCCGC | CTACCAGCTG | TCTTCGTGGT | ACAGGAACCC | AGGCCGGACG |
| 9401 | TGAATGCGCA | GGCGGTGCGC | CATGCCCCAG | GCTTCGTTTT | GACATCGGCG |
|      | ACTTACGCGT | CCGCCAGCCG | GTACGGGGTC | CGAAGCAAAA | CTGTAGCCGC |
| 9451 | CAGGTCTTTG | TAGTAGTCTT | GCATGAGCCT | TTCTACCGGC | ACTTCTTCTT |
|      | GTCCAGAAAC | ATCATCAGAA | CGTACTCGGA | AAGATGGCCG | TGAAGAAGAA |
| 9501 | CTCCTTCCTC | TTGTCCTGCA | TCTCTTGCAT | CTATCGCTGC | GGCGGCGGCG |
|      | GAGGAAGGAG | AACAGGACGT | AGAGAACGTA | GATAGCGACG | CCGCCGCCGC |
| 9551 | GAGTTTGGCC | GTAGGTGGCG | CCCTCTTCCT | CCCATGCGTG | TGACCCCGAA |
|      | CTCAAACCGG | CATCCACCGC | GGGAGAAGGA | GGGTACGCAC | ACTGGGGCTT |

FIG. 16A-12

|       |             |            |             |            |            |
|-------|-------------|------------|-------------|------------|------------|
| 9601  | GCCCCTCATC  | GGCTGAAGCA | GGGCTAGGTC  | GGCGACAACG | CGCTCGGCTA |
|       | CGGGGAGTAG  | CCGACTTCGT | CCCGATCCAG  | CCGCTGTTGC | GCGAGCCGAT |
| 9651  | ATATGGCCTG  | CTGCACCTGC | GTGAGGGTAG  | ACTGGAAGTC | ATCCATGTCC |
|       | TATACCGGAC  | GACGTGGACG | CACTCCCATC  | TGACCTTCAG | TAGGTACAGG |
| 9701  | ACAAAGCGGT  | GGTATGCGCC | CGTGTTGATG  | GTGTAAGTGC | AGTTGGCCAT |
|       | TGTTTCGCCA  | CCATACGCGG | GCACAACCTAC | CACATTCACG | TCAACCGGTA |
| 9751  | AACGGACCAG  | TTAACGGTCT | GGTGACCCGG  | CTGCGAGAGC | TCGGTGTACC |
|       | TTGCCCTGGTC | AATTGCCAGA | CCACTGGGCC  | GACGCTCTCG | AGCCACATGG |
| 9801  | TGAGACGCGA  | GTAAGCCCTC | GAGTCAAATA  | CGTAGTCGTT | GCAAGTCCGC |
|       | ACTCTGCGCT  | CATTCGGGAG | CTCAGTTTAT  | GCATCAGCAA | CGTTCAGGCG |
| 9851  | ACCAGGTACT  | GGTATCCCAC | CAAAAAGTGC  | GGCGGCGGCT | GGCGGTAGAG |
|       | TGGTCCATGA  | CCATAGGGTG | GTTTTTCACG  | CCGCCGCCGA | CCGCCATCTC |
| 9901  | GGGCCAGCGT  | AGGGTGGCCG | GGGCTCCGGG  | GGCGAGATCT | TCCAACATAA |
|       | CCCGGTCGCA  | TCCCACCGGC | CCCGAGGCCC  | CCGCTCTAGA | AGGTTGTATT |
| 9951  | GGCGATGATA  | TCCGTAGATG | TACCTGGACA  | TCCAGGTGAT | GCCGGCGGCG |
|       | CCGCTACTAT  | AGGCATCTAC | ATGGACCTGT  | AGGTCCACTA | CGGCCGCCCG |
| 10001 | GTGGTGGAGG  | CGCGCGGAAA | GTCGCGGACG  | CGGTTCCAGA | TGTTGCGCAG |
|       | CACCACCTCC  | GCGCGCCTTT | CAGCGCCTGC  | GCCAAGGTCT | ACAACGCGTC |
| 10051 | CGGCAAAAAG  | TGCTCCATGG | TCGGGACGCT  | CTGGCCGGTC | AGGCGCGCGC |
|       | GCCGTTTTTC  | ACGAGGTACC | AGCCCTGCGA  | GACCGGCCAG | TCCGCGCGCG |
| 10101 | AATCGTTGAC  | GCTCTAGACC | GTGCAAAAGG  | AGAGCCTGTA | AGCGGGCACT |
|       | TTAGCAACTG  | CGAGATCTGG | CACGTTTTTC  | TCTCGGACAT | TCGCCCGTGA |
| 10151 | CTTCCGTGGT  | CTGGTGGATA | AATTCGCAAG  | GGTATCATGG | CGGACGACCG |
|       | GAAGGCACCA  | GACCACCTAT | TTAAGCGTTC  | CCATAGTACC | GCCTGCTGGC |
| 10201 | GGGTTCGAGC  | CCCGTATCCG | GCCGTCCGCC  | GTGATCCATG | CGGTTACCGC |
|       | CCCAAGCTCG  | GGGCATAGGC | CGGCAGGCGG  | CACTAGGTAC | GCCAATGGCG |
| 10251 | CCGCGTGTCG  | AACCCAGGTG | TGCGACGTCA  | GACAACGGGG | GAGTGCTCCT |
|       | GGCGCACAGC  | TTGGGTCCAC | ACGCTGCAGT  | CTGTTGCCCC | CTCACGAGGA |
| 10301 | TTTGGCTTCC  | TTCCAGGCGC | GGCGGCTGCT  | GCGCTAGCTT | TTTTGGCCAC |
|       | AAACCGAAGG  | AAGGTCCGCG | CCGCCGACGA  | CGCGATCGAA | AAAACCGGTG |
| 10351 | TGGCCGCGCG  | CAGCGTAAGC | GGTTAGGCTG  | GAAAGCGAAA | GCATTAAGTG |
|       | ACCGGCGCGC  | GTCGCATTCG | CCAATCCGAC  | CTTTCGCTTT | CGTAATTCAC |

FIG. 16A-13

|       |                          |                          |                          |                          |                          |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 10401 | GCTCGCTCCC<br>CGAGCGAGGG | TGTAGCCGGA<br>ACATCGGCCT | GGGTATTTTT<br>CCCAATAAAA | CCAAGGGTTG<br>GGTTCCCAAC | AGTCGCGGGA<br>TCAGCGCCCT |
| 10451 | CCCCCGGTTT<br>GGGGGCCAAG | GAGTCTCGGA<br>CTCAGAGCCT | CCGGCCGGAC<br>GGCCGGCCTG | TGCGGCGAAC<br>ACGCCGCTTG | GGGGGTTTGC<br>CCCCCAAACG |
| 10501 | CTCCCCGTCA<br>GAGGGGCACT | TGCAAGACCC<br>ACGTTCTGGG | CGCTTGCAAA<br>GCGAACGTTT | TTCCTCCGGA<br>AAGGAGGCCT | AACAGGGACG<br>TTGTCCCTGC |
| 10551 | AGCCCCTTTT<br>TCGGGGAAAA | TTGCTTTTCC<br>AACGAAAAGG | CAGATGCATC<br>GTCTACGTAG | CGGTGCTGCG<br>GCCACGACGC | GCAGATGCGC<br>CGTCTACGCG |
| 10601 | CCCCCTCCTC<br>GGGGGAGGAG | AGCAGCGGCA<br>TCGTCGCCGT | AGAGCAAGAG<br>TCTCGTTCTC | CAGCGGCAGA<br>GTCGCCGTCT | CATGCAGGGC<br>GTACGTCCCG |
| 10651 | ACCCTCCCCT<br>TGGGAGGGGA | CCTCCTACCG<br>GGAGGATGGC | CGTCAGGAGG<br>GCAGTCCTCC | GGCGACATCC<br>CCGCTGTAGG | GCGGTTGACG<br>CGCCAACTGC |
| 10701 | CGGCAGCAGA<br>GCCGTCGTCT | TGGTGATTAC<br>ACCACTAATG | GAACCCCCGC<br>CTTGGGGGCG | GGCGCCGGGC<br>CCGCGGCCCG | CCGGCACTAC<br>GGCCGTGATG |
| 10751 | CTGGACTTGG<br>GACCTGAACC | AGGAGGGCGA<br>TCCTCCCGCT | GGGCCTGGCG<br>CCCGGACCGC | CGGCTAGGAG<br>GCCGATCCTC | CGCCCTCTCC<br>GCGGGAGAGG |
| 10801 | TGAGCGGCAC<br>ACTCGCCGTG | CCAAGGGTGC<br>GGTTCCCACG | AGCTGAAGCG<br>TCGACTTCGC | TGATACGCGT<br>ACTATGCGCA | GAGGCGTACG<br>CTCCGCATGC |
| 10851 | TGCCGCGGCA<br>ACGGCGCCGT | GAACCTGTTT<br>CTTGGACAAA | CGCGACCGCG<br>GCGCTGGCGC | AGGGAGAGGA<br>TCCCTCTCCT | GCCCCAGGAG<br>CGGGCTCCTC |
| 10901 | ATGCGGGATC<br>TACGCCCTAG | GAAAGTTCCA<br>CTTTCAAGGT | CGCAGGGCGC<br>GCGTCCCGCG | GAGCTGCGGC<br>CTCGACGCCG | ATGGCCTGAA<br>TACCGGACTT |
| 10951 | TCGCGAGCGG<br>AGCGCTCGCC | TTGCTGCGCG<br>AACGACGCGC | AGGAGGACTT<br>TCCTCCTGAA | TGAGCCCGAC<br>ACTCGGGCTG | GCGCGAACCG<br>CGCGCTTGGC |
| 11001 | GGATTAGTCC<br>CCTAATCAGG | CGCGCGCGCA<br>GCGCGCGCGT | CACGTGGCGG<br>GTGCACCGCC | CCGCCGACCT<br>GGCGGCTGGA | GGTAACCGCA<br>CCATTGGCGT |
| 11051 | TACGAGCAGA<br>ATGCTCGTCT | CGGTGAACCA<br>GCCACTTGGT | GGAGATTAAC<br>CCTCTAATTG | TTTCAAAAAA<br>AAAGTTTTTT | GCTTTAACAA<br>CGAAATTGTT |
| 11101 | CCACGTGCGT<br>GGTGACGCA  | ACGCTTGTGG<br>TGCGAACACC | CGCGCGAGGA<br>GCGCGCTCCT | GGTGGCTATA<br>CCACCGATAT | GGACTGATGC<br>CCTGACTACG |
| 11151 | ATCTGTGGGA<br>TAGACACCCT | CTTTGTAAGC<br>GAAACATTCG | GCGCTGGAGC<br>CGCGACCTCG | AAAACCCAAA<br>TTTTGGGTTT | TAGCAAGCCG<br>ATCGTTCGGC |

FIG. 16A-14

|       |            |             |            |            |            |
|-------|------------|-------------|------------|------------|------------|
| 11201 | CTCATGGCGC | AGCTG TTCCT | TATAGTGCAG | CACAGCAGGG | ACAACGAGGC |
|       | GAGTACCGCG | TCGACAAGGA  | ATATCACGTC | GTGTCGTCCC | TGTTGCTCCG |
| 11251 | ATTCAGGGAT | GCGCTGCTAA  | ACATAGTAGA | GCCCGAGGGC | CGCTGGCTGC |
|       | TAAGTCCCTA | CGCGACGATT  | TGTATCATCT | CGGGCTCCCG | GCGACCGACG |
| 11301 | TCGATTTGAT | AAACATCCTG  | CAGAGCATAG | TGGTGCAGGA | GCGCAGCTTG |
|       | AGCTAAACTA | TTTGTAGGAC  | GTCTCGTATC | ACCACGTCCT | CGCGTCGAAC |
| 11351 | AGCCTGGCTG | ACAAGGTGGC  | CGCCATCAAC | TATTCCATGC | TTAGCCTGGG |
|       | TCGGACCGAC | TGTTCCACCG  | GCGGTAGTTG | ATAAGGTACG | AATCGGACCC |
| 11401 | CAAGTTTTAC | GCCCGCAAGA  | TATACCATAC | CCCTTACGTT | CCCATAGACA |
|       | GTTCAAAATG | CGGGCGTTCT  | ATATGGTATG | GGGAATGCAA | GGGTATCTGT |
| 11451 | AGGAGGTAAA | GATCGAGGGG  | TTCTACATGC | GCATGGCGCT | GAAGGTGCTT |
|       | TCCTCCATTT | CTAGCTCCCC  | AAGATGTACG | CGTACCGCGA | CTTCACGAA  |
| 11501 | ACCTTGAGCG | ACGACCTGGG  | CGTTTATCGC | AACGAGCGCA | TCCACAAGGC |
|       | TGGAACTCGC | TGCTGGACCC  | GCAAATAGCG | TTGCTCGCGT | AGGTGTTCCG |
| 11551 | CGTGAGCGTG | AGCCGGCGGC  | GCGAGCTCAG | CGACCGCGAG | CTGATGCACA |
|       | GCACTCGCAC | TCGGCCGCCG  | CGCTCGAGTC | GCTGGCGCTC | GACTACGTGT |
| 11601 | GCCTGCAAAG | GGCCCTGGCT  | GGCACGGGCA | GCGGCGATAG | AGAGGCCGAG |
|       | CGGACGTTTC | CCGGGACCGA  | CCGTGCCCGT | CGCCGCTATC | TCTCCGGCTC |
| 11651 | TCCTACTTTG | ACGCGGGCGC  | TGACCTGCGC | TGGGCCCCAA | GCCGACGCGC |
|       | AGGATGAAAC | TGCGCCCGCG  | ACTGGACGCG | ACCCGGGGTT | CGGCTGCGCG |
| 11701 | CCTGGAGGCA | GCTGGGGCCG  | GACCTGGGCT | GGCGGTGGCA | CCGCGCGCGC |
|       | GGACCTCCGT | CGACCCCGGC  | CTGGACCCGA | CCGCCACCGT | GGGCGCGCGC |
| 11751 | CTGGCAACGT | CGGCGGCGTG  | GAGGAATATG | ACGAGGACGA | TGAGTACGAG |
|       | GACCGTTGCA | GCCGCCGCAC  | CTCCTTATAC | TGCTCCTGCT | ACTCATGCTC |
| 11801 | CCAGAGGACG | GCGAGTACTA  | AGCGGTGATG | TTTCTGATCA | GATGATGCAA |
|       | GGTCTCCTGC | CGCTCATGAT  | TCGCCACTAC | AAAGACTAGT | CTACTACGTT |
| 11851 | GACGCAACGG | ACCCGGCGGT  | GCGGGCGGGC | CTGCAGAGCC | AGCCGTCCGG |
|       | CTGCGTTGCC | TGGGCCGCCA  | CGCCCGCCGC | GACGTCTCGG | TCGGCAGGCC |
| 11901 | CCTTAACTCC | ACGGACGACT  | GGCGCCAGGT | CATGGACCGC | ATCATGTCGC |
|       | GGAATTGAGG | TGCCTGCTGA  | CCGCGGTCCA | GTACCTGGCG | TAGTACAGCG |
| 11951 | TGACTGCGCG | CAATCCTGAC  | GCGTTCCGGC | AGCAGCCGCA | GGCCAACCGG |
|       | ACTGACGCGC | GTTAGGACTG  | CGCAAGGCCG | TCGTGCGCGT | CCGGTTGGCC |

FIG. 16A-15



|       |            |             |            |            |            |
|-------|------------|-------------|------------|------------|------------|
| 12001 | CTCTCCGCAA | TTCTGGAAGC  | GGTGGTCCCG | GCGCGCGCAA | ACCCACGCA  |
|       | GAGAGGCGTT | AAGACCTTCG  | CCACCAGGGC | CGCGCGCGTT | TGGGGTGCCT |
| 12051 | CGAGAAGGTG | CTGGCGATCG  | TAAACGCGCT | GGCCGAAAAC | AGGGCCATCC |
|       | GCTCTTCCAC | GACCGCTAGC  | ATTTGCGCGA | CCGGCTTTTG | TCCCGGTAGG |
| 12101 | GGCCCGACGA | GGCCGGCCTG  | GTCTACGACG | CGCTGCTTCA | GCGCGTGGCT |
|       | CCGGGCTGCT | CCGGCCGGAC  | CAGATGCTGC | GCGACGAAGT | GCGGCACCGA |
| 12151 | CGTTACAACA | GCGGCAACGT  | GCAGACCAAC | CTGGACCGGC | TGGTGGGGGA |
|       | GCAATGTTGT | CGCCGTTGCA  | CGTCTGGTTG | GACCTGGCCG | ACCACCCCCT |
| 12201 | TGTGCGCGAG | GCCGTGGCGC  | AGCGTGAGCG | CGCGCAGCAG | CAGGGCAACC |
|       | ACACGCGCTC | CGGCACCGCG  | TCGCACTCGC | GCGCGTCGTC | GTCCCGTTGG |
| 12251 | TGGGCTCCAT | GGTTGCACTA  | AACGCCTTCC | TGAGTACACA | GCCCGCCAAC |
|       | ACCCGAGGTA | CCAACGTGAT  | TTGCGGAAGG | ACTCATGTGT | CGGGCGGTTG |
| 12301 | GTGCCGCGGG | GACAGGAGGA  | CTACACCAAC | TTTGTGAGCG | CACTGCGGCT |
|       | CACGGCGCCC | CTGTCCTCCT  | GATGTGGTTG | AAACACTCGC | GTGACGCCGA |
| 12351 | AATGGTGACT | GAGACACCGC  | AAAGTGAGGT | GTACCAGTCT | GGGCCAGACT |
|       | TTACCACTGA | CTCTGTGGCG  | TTTCACTCCA | CATGGTCAGA | CCCGGTCTGA |
| 12401 | ATTTTTTCCA | GACCAGTAGA  | CAAGGCCTGC | AGACCGTAAA | CCTGAGCCAG |
|       | TAAAAAAGGT | CTGGTCATCT  | GTTCCGGACG | TCTGGCATT  | GGACTCGGTC |
| 12451 | GCTTTCAAAA | ACTTGCAGGG  | GCTGTGGGGG | GTGCGGGCTC | CCACAGGCGA |
|       | CGAAAGTTTT | TGAACGTCCC  | CGACACCCCC | CACGCCCGAG | GGTGTCCGCT |
| 12501 | CCGCGCGACC | GTGTCTAGCT  | TGCTGACGCC | CAACTCGCGC | CTGTTGCTGC |
|       | GGCGCGCTGG | CACAGATCGA  | ACGACTGCGG | GTTGAGCGCG | GACAACGACG |
| 12551 | TGCTAATAGC | GCCCTTCACG  | GACAGTGGCA | GCGTGTCCCG | GGACACATAC |
|       | ACGATTATCG | CGGGAAGTGC  | CTGTCACCGT | CGCACAGGGC | CCTGTGTATG |
| 12601 | CTAGGTCACT | TGCTGACACT  | GTACCGCGAG | GCCATAGGTC | AGGCGCATGT |
|       | GATCCAGTGA | ACGACTGTGA  | CATGGCGCTC | CGGTATCCAG | TCCGCGTACA |
| 12651 | GGACGAGCAT | ACTTTCCAGG  | AGATTACAAG | TGTCAGCCGC | GCGCTGGGGC |
|       | CCTGCTCGTA | TGAAAGGTCC  | TCTAATGTTC | ACAGTCGGCG | CGCGACCCCC |
| 12701 | AGGAGGACAC | GGGCAGCCTG  | GAGGCAACCC | TAAACTACCT | GCTGACCAAC |
|       | TCCTCCTGTG | CCCGTCGGAC  | CTCCGTTGGG | ATTTGATGGA | CGACTGGTTG |
| 12751 | CGGCGGCAGA | AGATCCCCCTC | GTTGCACAGT | TTAAACAGCG | AGGAGGAGCG |
|       | GCCGCCGTCT | TCTAGGGGAG  | CAACGTGTCA | AATTTGTCGC | TCCTCCTCGC |

FIG. 16A-16

|       |            |            |            |            |            |
|-------|------------|------------|------------|------------|------------|
| 12801 | CATTTTGCGC | TACGTGCAGC | AGAGCGTGAG | CCTTAACCTG | ATGCGCGACG |
|       | GTAAAACGCG | ATGCACGTCG | TCTCGCACTC | GGAATTGGAC | TACGCGCTGC |
| 12851 | GGGTAACGCC | CAGCGTGGCG | CTGGACATGA | CCGCGCGCAA | CATGGAACCG |
|       | CCCATTGCGG | GTCGCACCGC | GACCTGTACT | GGCGCGCGTT | GTACCTTGGC |
| 12901 | GGCATGTATG | CCTCAAACCG | GCCGTTTATC | AACCGCCTAA | TGGACTACTT |
|       | CCGTACATAC | GGAGTTTGGC | CGGCAAATAG | TTGGCGGATT | ACCTGATGAA |
| 12951 | GCATCGCGCG | GCCGCCGTGA | ACCCCGAGTA | TTTCACCAAT | GCCATCTTGA |
|       | CGTAGCGCGC | CGGCGGCACT | TGGGGCTCAT | AAAGTGGTTA | CGGTAGAACT |
| 13001 | ACCCGCACTG | GCTACCGCCC | CCTGGTTTCT | ACACCGGGGG | ATTCGAGGTG |
|       | TGGGCGTGAC | CGATGGCGGG | GGACCAAAGA | TGTGGCCCCC | TAAGCTCCAC |
| 13051 | CCCGAGGGTA | ACGATGGATT | CCTCTGGGAC | GACATAGACG | ACAGCGTGTT |
|       | GGGCTCCCAT | TGCTACCTAA | GGAGACCCTG | CTGTATCTGC | TGTCGCACAA |
| 13101 | TTCCCCGCAA | CCGCAGACCC | TGCTAGAGTT | GCAACAGCGC | GAGCAGGCAG |
|       | AAGGGGCGTT | GGCGTCTGGG | ACGATCTCAA | CGTTGTCGCG | CTCGTCCGTC |
| 13151 | AGGCGGCGCT | GCGAAAGGAA | AGCTTCCGCA | GGCCAAGCAG | CTTGTCCGAT |
|       | TCCGCCGCGA | CGCTTTCCTT | TCGAAGGCGT | CCGGTTCGTC | GAACAGGCTA |
| 13201 | CTAGGCGCTG | CGGCCCCGCG | GTCAGATGCT | AGTAGCCCAT | TTCCAAGCTT |
|       | GATCCGCGAC | GCCGGGGCGC | CAGTCTACGA | TCATCGGGTA | AAGGTTGAA  |
| 13251 | GATAGGGTCT | CTTACCAGCA | CTCGCACCAC | CCGCCCCGCG | CTGCTGGGCG |
|       | CTATCCCAGA | GAATGGTCGT | GAGCGTGGTG | GGCGGGCGCG | GACGACCCGC |
| 13301 | AGGAGGAGTA | CCTAAACAAC | TCGCTGCTGC | AGCCGCAGCG | CGAAAAAAC  |
|       | TCTCCTCAT  | GGATTTGTTG | AGCGACGACG | TCGGCGTCGC | GCTTTTTTTG |
| 13351 | CTGCCTCCGG | CATTTCCCAA | CAACGGGATA | GAGAGCCTAG | TGGACAAGAT |
|       | GACGGAGGCC | GTAAAGGGTT | GTTGCCCTAT | CTCTCGGATC | ACCTGTTCTA |
| 13401 | GAGTAGATGG | AAGACGTACG | CGCAGGAGCA | CAGGGACGTG | CCAGGCCCCG |
|       | CTCATCTACC | TTCTGCATGC | GCGTCCTCGT | GTCCCTGCAC | GGTCCGGGCG |
| 13451 | GCCCGCCAC  | CCGTCGTCAA | AGGCACGACC | GTCAGCGGGG | TCTGGTGTGG |
|       | CGGGCGGGTG | GGCAGCAGTT | TCCGTGCTGG | CAGTCGCCCC | AGACCACACC |
| 13501 | GAGGACGATG | ACTCGGCAGA | CGACAGCAGC | GTCCTGGATT | TGGGAGGGAG |
|       | CTCCTGCTAC | TGAGCCGTCT | GCTGTCGTCG | CAGGACCTAA | ACCCTCCCTC |
| 13551 | TGGCAACCCG | TTTGCGCACC | TTCGCCCCAG | GCTGGGGAGA | ATGTTTTTAA |
|       | ACCGTTGGGC | AAACGCGTGG | AAGCGGGGTC | CGACCCCTCT | TACAAAATTT |

FIG. 16A-17

|       |                           |                          |                          |                           |                          |
|-------|---------------------------|--------------------------|--------------------------|---------------------------|--------------------------|
| 13601 | AAAAAAAAAA<br>TTTTTTTTTT  | GCATGATGCA<br>CGTACTACGT | AAATAAAAAA<br>TTTATTTTTT | CTCACCAAGG<br>GAGTGGTTCC  | CCATGGCACC<br>GGTACCGTGG |
| 13651 | GAGCGTTGGT<br>CTCGCAACCA  | TTTCTTGTAT<br>AAAGAACATA | TCCCCTTAGT<br>AGGGGAATCA | ATGCGGCGCG<br>TACGCCGCGC  | CGGCGATGTA<br>GCCGCTACAT |
| 13701 | TGAGGAAGGT<br>ACTCCTTCCA  | CCTCCTCCCT<br>GGAGGAGGGA | CCTACGAGAG<br>GGATGCTCTC | TGTGGTGAGC<br>ACACCACTCG  | GCGGCGCCAG<br>CGCCGCGGTC |
| 13751 | TGGCGGCGGC<br>ACCGCCGCCG  | GCTGGGTTCT<br>CGACCCAAGA | CCCTTCGATG<br>GGGAAGCTAC | CTCCCCTGGA<br>GAGGGGACCT  | CCCGCCGTTT<br>GGGCGGCAAA |
| 13801 | GTGCCTCCGC<br>CACGGAGGCG  | GGTACCTGCG<br>CCATGGACGC | GCCTACCGGG<br>CGGATGGCCC | GGGAGAAACA<br>CCCTCTTTGT  | GCATCCGTTA<br>CGTAGGCAAT |
| 13851 | CTCTGAGTTG<br>GAGACTCAAC  | GCACCCCTAT<br>CGTGGGGATA | TCGACACCAC<br>AGCTGTGGTG | CCGTGTGTAC<br>GGCACACATG  | CTGGTGGACA<br>GACCACCTGT |
| 13901 | ACAAGTCAAC<br>TGTTTCAGTTG | GGATGTGGCA<br>CCTACACCGT | TCCCTGAACT<br>AGGGACTTGA | ACCAGAACGA<br>TGGTCTTGCT  | CCACAGCAAC<br>GGTGTGTTG  |
| 13951 | TTTCTGACCA<br>AAAGACTGGT  | CGGTCATTCA<br>GCCAGTAAGT | AAACAATGAC<br>TTTGTTACTG | TACAGCCCGG<br>ATGTCGGGCC  | GGGAGGCAAG<br>CCCTCCGTTC |
| 14001 | CACACAGACC<br>GTGTGTCTGG  | ATCAATCTTG<br>TAGTTAGAAC | ACGACCGGTC<br>TGCTGGCCAG | GCACTGGGGC<br>CGTGACCCCG  | GGCGACCTGA<br>CCGCTGGACT |
| 14051 | AAACCATCCT<br>TTTGGTAGGA  | GCATACCAAC<br>CGTATGGTTG | ATGCCAAATG<br>TACGGTTTAC | TGAACGAGTT<br>ACTTGCTCAA  | CATGTTTACC<br>GTACAAATGG |
| 14101 | AATAAGTTTA<br>TTATTCAAAT  | AGGCGCGGGT<br>TCCGCGCCCA | GATGGTGTCG<br>CTACCACAGC | CGCTTGCCTA<br>GCGAACGGAT  | CTAAGGACAA<br>GATTCTGT   |
| 14151 | TCAGGTGGAG<br>AGTCCACCTC  | CTGAAATACG<br>GACTTTATGC | AGTGGGTGGA<br>TCACCCACCT | G TTCACGCTG<br>CAAGTGCGAC | CCCGAGGGCA<br>GGGCTCCCGT |
| 14201 | ACTACTCCGA<br>TGATGAGGCT  | GACCATGACC<br>CTGGTACTGG | ATAGACCTTA<br>TATCTGGAAT | TGAACAACGC<br>ACTTGTTGCG  | GATCGTGGAG<br>CTAGCACCTC |
| 14251 | CACTACTTGA<br>GTGATGAACT  | AAGTGGGCAG<br>TTCACCCGTC | ACAGAACGGG<br>TGTCTTGCCC | GTTCTGGAAA<br>CAAGACCTTT  | GCGACATCGG<br>CGCTGTAGCC |
| 14301 | GGTAAAGTTT<br>CCATTTCAA   | GACACCCGCA<br>CTGTGGGCGT | ACTTCAGACT<br>TGAAGTCTGA | GGGGTTTGAC<br>CCCCAAACTG  | CCCGTCACTG<br>GGGCAGTGAC |
| 14351 | GTCTTGTCAT<br>CAGAACAGTA  | GCCTGGGGTA<br>CGGACCCCAT | TATACAAACG<br>ATATGTTTGC | AAGCCTTCCA<br>TTCGGAAGGT  | TCCAGACATC<br>AGGTCTGTAG |

FIG. 16A-18

|       |                          |                           |                          |                           |                          |
|-------|--------------------------|---------------------------|--------------------------|---------------------------|--------------------------|
| 14401 | ATTTTGCTGC<br>TAAACGACG  | CAGGATGCGG<br>GTCCTACGCC  | GGTGGACTTC<br>CCACCTGAAG | ACCCACAGCC<br>TGGGTGTCGG  | GCCTGAGCAA<br>CGGACTCGTT |
| 14451 | CTTGTTGGGC<br>GAACAACCCG | ATCCGCAAGC<br>TAGGCGTTTCG | GGCAACCCTT<br>CCGTTGGGAA | CCAGGAGGGC<br>GGTCCTCCCG  | TTTAGGATCA<br>AAATCCTAGT |
| 14501 | CCTACGATGA<br>GGATGCTACT | TCTGGAGGGT<br>AGACCTCCCA  | GGTAACATTC<br>CCATTGTAAG | CCGCACTGTT<br>GGCGTGACAA  | GGATGTGGAC<br>CCTACACCTG |
| 14551 | GCCTACCAGG<br>CGGATGGTCC | CGAGCTTGAA<br>GCTCGAACTT  | AGATGACACC<br>TCTACTGTGG | GAACAGGGCG<br>CTTGTCCTCCG | GGGGTGGCGC<br>CCCCACCGCG |
| 14601 | AGGCGGCAGC<br>TCCGCCGTCG | AACAGCAGTG<br>TTGTCGTCAC  | GCAGCGGCGC<br>CGTCGCCGCG | GGAAGAGAAC<br>CCTTCTCTTG  | TCCAACGCGG<br>AGGTTGCGCC |
| 14651 | CAGCCGCGGC<br>GTCGGCGCCG | AATGCAGCCG<br>TTACGTCGGC  | GTGGAGGACA<br>CACCTCCTGT | TGAACGATCA<br>ACTTGCTAGT  | TGCCATTTCG<br>ACGGTAAGCG |
| 14701 | GGCGACACCT<br>CCGCTGTGGA | TTGCCACACG<br>AACGGTGTGC  | GGCTGAGGAG<br>CCGACTCCTC | AAGCGCGCTG<br>TTCGCGCGAC  | AGGCCGAAGC<br>TCCGGCTTCG |
| 14751 | AGCGGCCGAA<br>TCGCCGGCTT | GCTGCCGCCC<br>CGACGGCGGG  | CCGCTGCGCA<br>GGCGACGCGT | ACCCGAGGTC<br>TGGGCTCCAG  | GAGAAGCCTC<br>CTCTTCGGAG |
| 14801 | AGAAGAAACC<br>TCTTCTTTTG | GGTGATCAAA<br>CCACTAGTTT  | CCCCTGACAG<br>GGGGACTGTC | AGGACAGCAA<br>TCCTGTCGTT  | GAAACGCAGT<br>CTTTGCGTCA |
| 14851 | TACAACCTAA<br>ATGTTGGATT | TAAGCAATGA<br>ATTCGTTACT  | CAGCACCTTC<br>GTCGTGGAAG | ACCCAGTACC<br>TGGGTCATGG  | GCAGCTGGTA<br>CGTCGACCAT |
| 14901 | CCTTGCATAC<br>GGAACGTATG | AACTACGGCG<br>TTGATGCCGC  | ACCCTCAGAC<br>TGGGAGTCTG | CGGAATCCGC<br>GCCTTAGGCG  | TCATGGACCC<br>AGTACCTGGG |
| 14951 | TGCTTTGCAC<br>ACGAAACGTG | TCCTGACGTA<br>AGGACTGCAT  | ACCTGCGGCT<br>TGGACGCCGA | CGGAGCAGGT<br>GCCTCGTCCA  | CTACTGGTCG<br>GATGACCAGC |
| 15001 | TTGCCAGACA<br>AACGGTCTGT | TGATGCAAGA<br>ACTACGTTCT  | CCCCGTGACC<br>GGGGCACTGG | TTCCGCTCCA<br>AAGGCGAGGT  | CGCGCCAGAT<br>GCGCGGTCTA |
| 15051 | CAGCAACTTT<br>GTCGTTGAAA | CCGGTGGTGG<br>GGCCACCACC  | GCGCCGAGCT<br>CGCGGCTCGA | GTTGCCCGTG<br>CAACGGGCAC  | CACTCCAAGA<br>GTGAGGTCTT |
| 15101 | GCTTCTACAA<br>CGAAGATGTT | CGACCAGGCC<br>GCTGGTCCGG  | GTCTACTCCC<br>CAGATGAGGG | AACTCATCCG<br>TTGAGTAGGC  | CCAGTTTACC<br>GGTCAAATGG |
| 15151 | TCTCTGACCC<br>AGAGACTGGG | ACGTGTTCAA<br>TGCACAAGTT  | TCGCTTTCCC<br>AGCGAAAGGG | GAGAACCAGA<br>CTCTTGGTCT  | TTTTGGCGCG<br>AAAACCGCGC |

FIG. 16A-19

|       |                           |                          |                          |                           |                          |
|-------|---------------------------|--------------------------|--------------------------|---------------------------|--------------------------|
| 15201 | CCCGCCAGCC<br>GGGCGGTCGG  | CCCACCATCA<br>GGGTGGTAGT | CCACCGTCAG<br>GGTGGCAGTC | TGAAAACGTT<br>ACTTTTGCAA  | CCTGCTCTCA<br>GGACGAGAGT |
| 15251 | CAGATCACGG<br>GTCTAGTGCC  | GACGCTACCG<br>CTGCGATGGC | CTGCGCAACA<br>GACGCGTTGT | GCATCGGAGG<br>CGTAGCCTCC  | AGTCCAGCGA<br>TCAGGTGCGT |
| 15301 | GTGACCATTA<br>CACTGGTAAT  | CTGACGCCAG<br>GACTGCGGTC | ACGCCGCACC<br>TGCGGCGTGG | TGCCCCCTACG<br>ACGGGGATGC | TTTACAAGGC<br>AAATGTTCCG |
| 15351 | CCTGGGCATA<br>GGACCCGTAT  | GTCTCGCCGC<br>CAGAGCGGCG | GCGTCCTATC<br>CGCAGGATAG | GAGCCGCACT<br>CTCGGCCTGA  | TTTTGAGCAA<br>AAAACTCGTT |
| 15401 | GCATGTCCAT<br>CGTACAGGTA  | CCTTATATCG<br>GGAATATAGC | CCCAGCAATA<br>GGGTCGTTAT | ACACAGGCTG<br>TGTGTCCGAC  | GGGCCTGCGC<br>CCCGGACGCG |
| 15451 | TTCCCAAGCA<br>AAGGGTTCGT  | AGATGTTTGG<br>TCTACAAACC | CGGGGCCAAG<br>GCCCGGTTTC | AAGCGCTCCG<br>TTCGCGAGGC  | ACCAACACCC<br>TGGTTGTGGG |
| 15501 | AGTGCGCGTG<br>TCACGCGCAC  | CGCGGGCACT<br>GCGCCCGTGA | ACCGCGCGCC<br>TGGCGCGCGG | CTGGGGCGCG<br>GACCCCGCGC  | CACAAACGCG<br>GTGTTTGCGC |
| 15551 | GCCGCACTGG<br>CGGCGTGACC  | GCGCACCACC<br>CGCGTGGTGG | GTCGATGACG<br>CAGCTACTGC | CCATCGACGC<br>GGTAGCTGCG  | GGTGGTGGAG<br>CCACCACCTC |
| 15601 | GAGGCGCGCA<br>CTCCGCGCGT  | ACTACACGCC<br>TGATGTGCGG | CACGCCGCCA<br>GTGCGGCGGT | CCAGTGTCCA<br>GGTCACAGGT  | CAGTGGACGC<br>GTCACCTGCG |
| 15651 | GGCCATTGAG<br>CCGGTAAGTC  | ACCGTGGTGC<br>TGGCACCACG | GCGGAGCCCG<br>CGCCTCGGGC | GCGCTATGCT<br>CGCGATACGA  | AAAATGAAGA<br>TTTTACTTCT |
| 15701 | GACGGCGGAG<br>CTGCCGCCCTC | GCGCGTAGCA<br>CGCGCATCGT | CGTCGCCACC<br>GCAGCGGTGG | GCCGCCGACC<br>CGGCGGCTGG  | CGGCACTGCC<br>GCCGTGACGG |
| 15751 | GCCCAACGCG<br>CGGGTTGCGC  | CGGCGGCGGC<br>GCCGCCGCCG | CCTGCTTAAC<br>GGACGAATTG | CGCGCACGTC<br>GCGCGTGACG  | GCACCGGCCG<br>CGTGGCCGGC |
| 15801 | ACGGGCGGCC<br>TGCCCGCCGG  | ATGCGGGCCG<br>TACGCCCGGC | CTCGAAGGCT<br>GAGCTTCCGA | GGCCGCGGGT<br>CCGGCGCCCA  | ATTGTCACTG<br>TAACAGTGAC |
| 15851 | TGCCCCCAG<br>ACGGGGGGTC   | GTCCAGGCGA<br>CAGGTCCGCT | CGAGCGGCCG<br>GCTCGCCGGC | CCGCAGCAGC<br>GGCGTCGTG   | CGCGGCCATT<br>GCGCCGGTAA |
| 15901 | AGTGCTATGA<br>TCACGATACT  | CTCAGGGTGC<br>GAGTCCCAGC | CAGGGGCAAC<br>GTCCCCGTTG | GTGTATTGGG<br>CACATAACCC  | TGCGCGACTC<br>ACGCGCTGAG |
| 15951 | GGTTAGCGGC<br>CCAATCGCCG  | CTGCGCGTGC<br>GACGCGCACG | CCGTGCGCAC<br>GGCACGCGTG | CCGCCCCCCG<br>GGCGGGGGGC  | CGCAACTAGA<br>GCGTTGATCT |

FIG. 16A-20

|       |                          |                           |                          |                          |                          |
|-------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| 16001 | TTGCAAGAAA<br>AACGTTCTTT | AACTACTTA<br>TTTGATGAAT   | GACTCGTACT<br>CTGAGCATGA | GTTGTATGTA<br>CAACATACAT | TCCAGCGGCG<br>AGGTCGCCGC |
| 16051 | GCGGCGCGCA<br>CGCCGCGCGT | ACGAAGCTAT<br>TGCTTCGATA  | GTCCAAGCGC<br>CAGGTTTCGC | AAAATCAAAG<br>TTTTAGTTTC | AAGAGATGCT<br>TTCTCTACGA |
| 16101 | CCAGGTCATC<br>GGTCCAGTAG | GCGCCGGAGA<br>CGCGGCCTCT  | TCTATGGCCC<br>AGATAACGGG | CCCGAAGAAG<br>GGGCTTCTTC | GAAGAGCAGG<br>CTTCTCGTCC |
| 16151 | ATTACAAGCC<br>TAATGTTTCG | CCGAAAGCTA<br>GGCTTTTCGAT | AAGCGGGTCA<br>TTCGCCCAGT | AAAAGAAAAA<br>TTTTCTTTTT | GAAAGATGAT<br>CTTTCTACTA |
| 16201 | GATGATGAAC<br>CTACTACTTG | TTGACGACGA<br>AACTGCTGCT  | GGTGGAACTG<br>CCACCTTGAC | CTGCACGCTA<br>GACGTGCGAT | CCGCGCCCAG<br>GGCGCGGGTC |
| 16251 | GCGACGGGTA<br>CGCTGCCCAT | CAGTGGAAAG<br>GTCACCTTTC  | GTCGACGCGT<br>CAGCTGCGCA | AAAACGTGTT<br>TTTTGCACAA | TTGCGACCCG<br>AACGCTGGGC |
| 16301 | GCACCACCGT<br>CGTGGTGGCA | AGTCTTTTACG<br>TCAGAAATGC | CCCGGTGAGC<br>GGGCCACTCG | GCTCCACCCG<br>CGAGGTGGGC | CACCTACAAG<br>GTGGATGTTT |
| 16351 | CGCGTGTATG<br>GCGCACATAC | ATGAGGTGTA<br>TACTCCACAT  | CGGCGACGAG<br>GCCGCTGCTC | GACCTGCTTG<br>CTGGACGAAC | AGCAGGCCAA<br>TCGTCCGGTT |
| 16401 | CGAGCGCCTC<br>GCTCGCGGAG | GGGGAGTTTG<br>CCCCTCAAAC  | CCTACGGAAA<br>GGATGCCTTT | GCGGCATAAG<br>CGCCGTATTC | GACATGCTGG<br>CTGTACGACC |
| 16451 | CGTTGCCGCT<br>GCAACGGCGA | GGACGAGGGC<br>CCTGCTCCCC  | AACCCAACAC<br>TTGGGTGTG  | CTAGCCTAAA<br>GATCGGATTT | GCCCGTAACA<br>CGGGCATTGT |
| 16501 | CTGCAGCAGG<br>GACGTCGTCC | TGCTGCCCCG<br>ACGACGGGCG  | GCTTGCACCG<br>CGAACGTGGC | TCCGAAGAAA<br>AGGCTTCTTT | AGCGCGGCCT<br>TCGCGCCGGA |
| 16551 | AAAGCGCGAG<br>TTTCGCGCTC | TCTGGTGACT<br>AGACCACTGA  | TGGCACCCAC<br>ACCGTGGGTG | CGTGCAGCTG<br>GCACGTCGAC | ATGGTACCCA<br>TACCATGGGT |
| 16601 | AGCGCCAGCG<br>TCGCGGTCGC | ACTGGAAGAT<br>TGACCTTCTA  | GTCTTGGA<br>CAGAACCTTT   | AAATGACCGT<br>TTTACTGGCA | GGAACCTGGG<br>CCTTGGACCC |
| 16651 | CTGGAGCCCG<br>GACCTCGGGC | AGGTCCGCGT<br>TCCAGGCGCA  | GCGGCCAATC<br>CGCCGGTTAG | AAGCAGGTGG<br>TTCGTCCACC | CGCCGGGACT<br>GCGGCCCTGA |
| 16701 | GGGCGTGCAG<br>CCCGCACGTC | ACCGTGGACG<br>TGGCACCTGC  | TTCAGATACC<br>AAGTCTATGG | CACTACCAGT<br>GTGATGGTCA | AGCACCAGTA<br>TCGTGGTCAT |
| 16751 | TTGCCACCGC<br>AACGGTGGCG | CACAGAGGGC<br>GTGTCTCCCC  | ATGGAGACAC<br>TACCTCTGTG | AAACGTCCCC<br>TTTGCAGGGG | GGTTGCCTCA<br>CCAACGGAGT |

FIG. 16A-21

|       |            |            |            |            |            |
|-------|------------|------------|------------|------------|------------|
| 16801 | GCGGTGGCGG | ATGCCGCGGT | GCAGGCGGTC | GCTGCGGCCG | CGTCCAAGAC |
|       | CGCCACCGCC | TACGGCGCCA | CGTCCGCCAG | CGACGCCGGC | GCAGGTTCTG |
| 16851 | CTCTACGGAG | GTGCAAACGG | ACCCGTGGAT | GTTTCGCGTT | TCAGCCCCC  |
|       | GAGATGCCTC | CACGTTTGCC | TGGGCACCTA | CAAAGCGCAA | AGTCGGGGGG |
| 16901 | GGCGCCCGCG | CCGTTCGAGG | AAGTACGGCG | CCGCCAGCGC | GCTACTGCCC |
|       | CCGCGGGCGC | GGCAAGCTCC | TTCATGCCGC | GGCGGTCGCG | CGATGACGGG |
| 16951 | GAATATGCCC | TACATCCTTC | CATTGCGCCT | ACCCCCGGCT | ATCGTGGCTA |
|       | CTTATACGGG | ATGTAGGAAG | GTAACGCGGA | TGGGGGCCGA | TAGCACCGAT |
| 17001 | CACCTACCGC | CCCAGAAGAC | GAGCAACTAC | CCGACGCCGA | ACCACCACTG |
|       | GTGGATGGCG | GGGTCTTCTG | CTCGTTGATG | GGCTGCGGCT | TGGTGGTGAC |
| 17051 | GAACCCGCCG | CCGCCGTCGC | CGTCGCCAGC | CCGTGCTGGC | CCCGATTTC  |
|       | CTTGGGCGGC | GGCGGCAGCG | GCAGCGGTCG | GGCACGACCG | GGGCTAAAGG |
| 17101 | GTGCGCAGGG | TGGCTCGCGA | AGGAGGCAGG | ACCCTGGTGC | TGCCAACAGC |
|       | CACGCGTCCC | ACCGAGCGCT | TCCTCCGTCC | TGGGACCACG | ACGGTTGTGC |
| 17151 | GCGCTACCAC | CCCAGCATCG | TTTAAAAGCC | GGTCTTTGTG | GTTCTTGCGC |
|       | CGCGATGGTG | GGGTCGTAGC | AAATTTTCGG | CCAGAAACAC | CAAGAACGTC |
| 17201 | ATATGGCCCT | CACCTGCCGC | CTCCGTTTCC | CGGTGCCGGG | ATTCCGAGGA |
|       | TATACCGGGA | GTGGACGGCG | GAGGCAAAGG | GCCACGGCCC | TAAGGCTCCT |
| 17251 | AGAATGCACC | GTAGGAGGGG | CATGGCCGGC | CACGGCCTGA | CGGGCGGCAT |
|       | TCTTACGTGG | CATCCTCCCC | GTACCGGCCG | GTGCCGGA   | GCCCGCCGTA |
| 17301 | GCGTCGTGCG | CACCACCGGC | GGCGGCGCGC | GTCGCACCGT | CGCATGCGCG |
|       | CGCAGCACGC | GTGGTGGCCG | CCGCCGCGCG | CAGCGTGGA  | GCGTACGCGC |
| 17351 | GCGGTATCCT | GCCCCTCCTT | ATTCCACTGA | TCGCCGCGGC | GATTGGCGCC |
|       | CGCCATAGGA | CGGGGAGGAA | TAAGGTGACT | AGCGGCGCCG | CTAACCGCGG |
| 17401 | GTGCCCCGAA | TTGCATCCGT | GGCCTTGCAG | GCGCAGAGAC | ACTGATTAAA |
|       | CACGGGCCTT | AACGTAGGCA | CCGGAACGTC | CGCGTCTCTG | TGACTAATTT |
| 17451 | AACAAGTTGC | ATGTGGAAAA | ATCAAAATAA | AAAGTCTGGA | CTCTCACGCT |
|       | TTGTTCAACG | TACACCTTTT | TAGTTTTATT | TTTCAGACCT | GAGAGTGCGA |
| 17501 | CGCTTGGTCC | TGTAACTATT | TTGTAGAATG | GAAGACATCA | ACTTTGCGTC |
|       | GCGAACCAGG | ACATTGATAA | AACATCTTAC | CTTCTGTAGT | TGAAACGCAG |
| 17551 | TCTGGCCCCG | CGACACGGCT | CGCGCCCGTT | CATGGGAAAC | TGGCAAGATA |
|       | AGACCGGGGC | GCTGTGCCGA | GCGCGGGCAA | GTACCCTTTG | ACCGTTCTAT |

FIG. 16A-22

|       |                          |                           |                          |                          |                           |
|-------|--------------------------|---------------------------|--------------------------|--------------------------|---------------------------|
| 17601 | TCGGCACCAG<br>AGCCGTGGTC | CAATATGAGC<br>GTTATACTCG  | GGTGGCGCCT<br>CCACCGCGGA | TCAGCTGGGG<br>AGTCGACCCC | CTCGCTGTGG<br>GAGCGACACC  |
| 17651 | AGCGGCATTA<br>TCGCCGTAAT | AAAATTTTCGG<br>TTTTAAAGCC | TTCCACCGTT<br>AAGGTGGCAA | AAGAACTATG<br>TTCTTGATAC | GCAGCAAGGC<br>CGTCGTTCGG  |
| 17701 | CTGGAACAGC<br>GACCTTGTCG | AGCACAGGCC<br>TCGTGTCCGG  | AGATGCTGAG<br>TCTACGACTC | GGATAAGTTG<br>CCTATTCAAC | AAAGAGCAAA<br>TTTCTCGTTT  |
| 17751 | ATTTCCAACA<br>TAAAGGTTGT | AAAGGTGGTA<br>TTTCCACCAT  | GATGGCCTGG<br>CTACCGGACC | CCTCTGGCAT<br>GGAGACCGTA | TAGCGGGGTG<br>ATCGCCCCAC  |
| 17801 | GTGGACCTGG<br>CACCTGGACC | CCAACCAGGC<br>GGTTGGTCCG  | AGTGCAAAAT<br>TCACGTTTTA | AAGATTAACA<br>TTCTAATTGT | GTAAGCTTGA<br>CATTCGAACT  |
| 17851 | TCCCCGCCCT<br>AGGGGCGGGA | CCCGTAGAGG<br>GGGCATCTCC  | AGCCTCCACC<br>TCGGAGGTGG | GGCCGTGGAG<br>CCGGCACCTC | ACAGTGTCTC<br>TGTCACAGAG  |
| 17901 | CAGAGGGGCG<br>GTCTCCCCGC | TGGCGAAAAG<br>ACCGCTTTTC  | CGTCCGCGCC<br>GCAGGCGCGG | CCGACAGGGA<br>GGCTGTCCCT | AGAAACTCTG<br>TC'TTTGAGAC |
| 17951 | GTGACGCAAA<br>CACTGCGTTT | TAGACGAGCC<br>ATCTGCTCGG  | TCCCTCGTAC<br>AGGGAGCATG | GAGGAGGCAC<br>CTCCTCCGTG | TAAAGCAAGG<br>ATTTTCGTTCC |
| 18001 | CCTGCCCACC<br>GGACGGGTGG | ACCCGTCCCA<br>TGGGCAGGGT  | TCGCGCCCAT<br>AGCGCGGGTA | GGCTACCGGA<br>CCGATGGCCT | GTGCTGGGCC<br>CACGACCCGG  |
| 18051 | AGCACACACC<br>TCGTGTGTGG | CGTAACGCTG<br>GCATTGCGAC  | GACCTGCCTC<br>CTGGACGGAG | CCCCGCCGA<br>GGGGGCGGCT  | CACCCAGCAG<br>GTGGGTCTGC  |
| 18101 | AAACCTGTGC<br>TTTGGACACG | TGCCAGGCCC<br>ACGGTCCGGG  | GACCGCCGTT<br>CTGGCGGCAA | GTTGTAACCC<br>CAACATTGGG | GTCTAGCCG<br>CAGGATCGGC   |
| 18151 | CGCGTCCCTG<br>GCGCAGGGAC | CGCCGCGCCG<br>GCGGCGCGGC  | CCAGCGGTCC<br>GGTCGCCAGG | GCGATCGTTG<br>CGCTAGCAAC | CGGCCCGTAG<br>GCCGGGCATC  |
| 18201 | CCAGTGCGAA<br>GGTCACCGTT | CTGGCAAAGC<br>GACCGTTTCG  | AACTGAACA<br>TGTGACTTGT  | GCATCGTGGG<br>CGTAGCACC  | TCTGGGGGTG<br>AGACCCCCAC  |
| 18251 | CAATCCCTGA<br>GTTAGGGACT | AGCGCCGACG<br>TCGCGGCTGC  | ATGCTTCTGA<br>TACGAAGACT | TAGCTAACGT<br>ATCGATTGCA | GTCGTATGTG<br>CAGCATAAC   |
| 18301 | TGTCATGTAT<br>ACAGTACATA | GCGTCCATGT<br>CGCAGGTACA  | CGCCGCCAGA<br>GCGGCGGTCT | GGAGCTGCTG<br>CCTCGACGAC | AGCCGCCGCG<br>TCGGCGGCGC  |
| 18351 | CGCCCGCTTT<br>GCGGGCGAAA | CCAAGATGGC<br>GGTTCTACCG  | TACCCCTTCG<br>ATGGGGAAGC | ATGATGCCGC<br>TACTACGGCG | AGTGGTCTTA<br>TCACCAGAAT  |

FIG. 16A-23



|       |             |            |             |            |             |
|-------|-------------|------------|-------------|------------|-------------|
| 18401 | CATGCACATC  | TCGGGCCAGG | ACGCCTCGGA  | GTACCTGAGC | CCCGGGCTGG  |
|       | GTACGTGTAG  | AGCCCGGTCC | TGCGGAGCCT  | CATGGACTCG | GGGCCCCGACC |
| 18451 | TGCAGTTTGC  | CCGCGCCACC | GAGACGTACT  | TCAGCCTGAA | TAACAAGTTT  |
|       | ACGTCAAACG  | GGCGCGGTGG | CTCTGCATGA  | AGTCGGACTT | ATTGTTCAAA  |
| 18501 | AGAAACCCCA  | CGGTGGCGCC | TACGCACGAC  | GTGACCACAG | ACCGGTCCCA  |
|       | TCTTTGGGGT  | GCCACCGCGG | ATGCGTGCTG  | CACTGGTGTC | TGGCCAGGGT  |
| 18551 | GCGTTTGACG  | CTGCGGTTCA | TCCCTGTGGA  | CCGTGAGGAT | ACTGCGTACT  |
|       | CGCAAAC TGC | GACGCCAAGT | AGGGACACCT  | GGCACTCCTA | TGACGCATGA  |
| 18601 | CGTACAAGGC  | GCGGTTTACC | CTAGCTGTGG  | GTGATAACCG | TGTGCTGGAC  |
|       | GCATGTTCCG  | CGCCAAGTGG | GATCGACACC  | CACTATTGGC | ACACGACCTG  |
| 18651 | ATGGCTTCCA  | CGTACTTTGA | CATCCGCGGC  | GTGCTGGACA | GGGGCCCTAC  |
|       | TACCGAAGGT  | GCATGAAACT | GTAGGCGCCG  | CACGACCTGT | CCCCGGGATG  |
| 18701 | TTTTAAGCCC  | TACTCTGGCA | CTGCCTACAA  | CGCCCTGGCT | CCCAAGGGTG  |
|       | AAAATTCGGG  | ATGAGACCGT | GACGGATGTT  | GCGGGACCGA | GGGTTCCAC   |
| 18751 | CCCCAAATCC  | TTGCGAATGG | GATGAAGCTG  | CTACTGCTCT | TGAAATAAAC  |
|       | GGGGTTTAGG  | AACGCTTACC | CTACTTCGAC  | GATGACGAGA | ACTTTATTTG  |
| 18801 | CTAGAAGAAG  | AGGACGATGA | CAACGAAGAC  | GAAGTAGACG | AGCAAGCTGA  |
|       | GATCTTCTTC  | TCCTGCTACT | GTTGCTTCTG  | CTTCATCTGC | TCGTTGACT   |
| 18851 | GCAGCAAAAA  | ACTCACGTAT | TTGGGCAGGC  | GCCTTATTCT | GGTATAAATA  |
|       | CGTCGTTTTT  | TGAGTGCATA | AACCCGTCCG  | CGBAATAAGA | CCATATTTAT  |
| 18901 | TTACAAAGGA  | GGGTATTCAA | ATAGGTGTCTG | AAGGTCAAAC | ACCTAAATAT  |
|       | AATGTTTCCT  | CCCATAAGTT | TATCCACAGC  | TTCCAGTTTG | TGGATTTATA  |
| 18951 | GCCGATAAAA  | CATTTCAACC | TGAACCTCAA  | ATAGGAGAAT | CTCAGTGGTA  |
|       | CGGCTATTTT  | GTAAAGTTGG | ACTTGAGATT  | TATCCTCTTA | GAGTCACCAT  |
| 19001 | CGAAACAGAA  | ATTAATCATG | CAGCTGGGAG  | AGTCCTAAAA | AAGACTACCC  |
|       | GCTTTGTCTT  | TAATTAGTAC | GTCGACCCTC  | TCAGGATTTT | TTCTGATGGG  |
| 19051 | CAATGAAACC  | ATGTTACGGT | TCATATGCAA  | AACCCACAAA | TGAAAATGGA  |
|       | GTTACTTTGG  | TACAATGCCA | AGTATACGTT  | TTGGGTGTTT | ACTTTTACCT  |
| 19101 | GGGCAAGGCA  | TTCTTGTAAG | GCAACAAAT   | GGAAAGCTAG | AAAGTCAAGT  |
|       | CCCGTTCCGT  | AAGAACATTT | CGTTGTTTTA  | CCTTTCGATC | TTTCAGTTCA  |
| 19151 | GGAAATGCAA  | TTTTTCTCAA | CTACTGAGGC  | AGCCGCAGGC | AATGGTGATA  |
|       | CCTTTACGTT  | AAAAAGAGTT | GATGACTCCG  | TCGGCGTCCG | TTACCACTAT  |

FIG. 16A-24

|       |                           |                           |                          |                           |                          |
|-------|---------------------------|---------------------------|--------------------------|---------------------------|--------------------------|
| 19201 | ACTTGACTCC<br>TGAAGTGGTA  | TAAAGTGGTA<br>ATTCACCAT   | TTGTACAGTG<br>AACATGTCAC | AAGATGTAGA<br>TTCTACATCT  | TATAGAAACC<br>ATATCTTTGG |
| 19251 | CCAGACACTC<br>GGTCTGTGAG  | ATATTTCTTA<br>TATAAAGAAT  | CATGCCCACT<br>GTACGGGTGA | ATTAAGGAAG<br>TAATTCCTTC  | GTAAGTCACG<br>CATTGAGTGC |
| 19301 | AGAACTAATG<br>TCTTGATTAC  | GGCCAACAAT<br>CCGGTTGTTA  | CTATGCCCAA<br>GATACGGGTT | CAGGCCTAAT<br>GTCCGGATTA  | TACATTGCTT<br>ATGTAACGAA |
| 19351 | TTAGGGACAA<br>AATCCCTGTT  | TTTTATTGGT<br>AAAATAACCA  | CTAATGTATT<br>GATTACATAA | ACAACAGCAC<br>TGTTGTCTGT  | GGGTAATATG<br>CCCATTATAC |
| 19401 | GGTGTTCTGG<br>CCACAAGACC  | CGGGCCAAGC<br>GCCCCGTTTC  | ATCGCAGTTG<br>TAGCGTCAAC | AATGCTGTTG<br>TTACGACAAC  | TAGATTTGCA<br>ATCTAAACGT |
| 19451 | AGACAGAAAC<br>TCTGTCTTTG  | ACAGAGCTTT<br>TGTCTCGAAA  | CATACCAGCT<br>GTATGGTCGA | TTTGCTTGAT<br>AAACGAACCTA | TCCATTGGTG<br>AGGTAACCAC |
| 19501 | ATAGAACCAG<br>TATCTTGGTC  | GTACTTTTCT<br>CATGAAAAGA  | ATGTGGAATC<br>TACACCTTAG | AGGCTGTTGA<br>TCCGACAACCT | CAGCTATGAT<br>GTCGATACTA |
| 19551 | CCAGATGTTA<br>GGTCTACAAT  | GAATTATTGA<br>CTTAATAACT  | AAATCATGGA<br>TTTAGTACCT | ACTGAAGATG<br>TGACTTCTAC  | AACTTCCAAA<br>TTGAAGGTTT |
| 19601 | TTACTGCCTT<br>AATGACGAAA  | CCACTGGGAG<br>GGTGACCCTC  | GTGTGATTAA<br>CACACTAATT | TACAGAGACT<br>ATGTCTCTGA  | CTTACCAAGG<br>GAATGGTTCC |
| 19651 | TAAAACCTAA<br>ATTTTGATT   | AACAGGTCAG<br>TTGTCCAGTC  | GAAAATGGAT<br>CTTTTACCTA | GGGAAAAAGA<br>CCCTTTTTCT  | TGCTACAGAA<br>ACGATGTCTT |
| 19701 | TTTTTCAGATA<br>AAAAGTCTAT | AAAATGAAAT<br>TTTTACTTTA  | AAGAGTTGGA<br>TTCTCAACCT | AATAATTTTG<br>TTATTAAAAC  | CCATGGAAAT<br>GGTACCTTTA |
| 19751 | CAATCTAAAT<br>GTTAGATTTA  | GCCAACCTGT<br>CGGTTGGACA  | GGAGAAATTT<br>CCTCTTTAAA | CCTGTACTCC<br>GGACATGAGG  | AACATAGCGC<br>TTGTATCGCG |
| 19801 | TGTATTTGCC<br>ACATAAACGG  | CGACAAGCTA<br>GCTGTTTCGAT | AAGTACAGTC<br>TTCATGTCAG | CTTCCAACGT<br>GAAGGTTGCA  | AAAAATTTCT<br>TTTTTAAAGA |
| 19851 | GATAACCCAA<br>CTATTGGGTT  | ACACCTACGA<br>TGTGGATGCT  | CTACATGAAC<br>GATGTACTTG | AAGCGAGTGG<br>TTCGCTCACC  | TGGCTCCCGG<br>ACCGAGGGCC |
| 19901 | GCTAGTGGAC<br>CGATCACCTG  | TGCTACATTA<br>ACGATGTAAT  | ACCTTGGAGC<br>TGGAACCTCG | ACGCTGGTCC<br>TGCGACCAGG  | CTTGACTATA<br>GAACTGATAT |
| 19951 | TGGACAACGT<br>ACCTGTTGCA  | CAACCCATTT<br>GTTGGGTAAA  | AACCACCACC<br>TTGGTGGTGG | GCAATGCTGG<br>CGTTACGACC  | CCTGCGCTAC<br>GGACGCGATG |

FIG. 16A-25

|       |             |             |            |             |             |
|-------|-------------|-------------|------------|-------------|-------------|
| 20001 | CGCTCAATGT  | TGCTGGGCAA  | TGGTCGCTAT | GTGCCCTTCC  | ACATCCAGGT  |
|       | GCGAGTTACA  | ACGACCCGTT  | ACCAGCGATA | CACGGGAAGG  | TGTAGGTCCA  |
| 20051 | GCCTCAGAAG  | TTCTTTGCCA  | TTAAAAACCT | CCTTCTCCTG  | CCGGGCTCAT  |
|       | CGGAGTCTTC  | AAGAAACGGT  | AATTTTTTGA | GGAAGAGGAC  | GGCCCGAGTA  |
| 20101 | ACACCTACGA  | GTGGAAC TTC | AGGAAGGATG | TTAACATGGT  | TCTGCAGAGC  |
|       | TGTGGATGCT  | CACCTTGAAG  | TCCTTCCTAC | AATTGTACCA  | AGACGTCTCG  |
| 20151 | TCCCTAGGAA  | ATGACCTAAG  | GGTTGACGGA | GCCAGCATTA  | AGTTTGATAG  |
|       | AGGGATCCTT  | TACTGGATTC  | CCAAC TGCT | CGGTCGTAAT  | TCAAAC TATC |
| 20201 | CATTTGCCTT  | TACGCCACCT  | TCTTCCCCAT | GGCCCACAAC  | ACCGCCTCCA  |
|       | GTAAACGGAA  | ATGCGGTGGA  | AGAAGGGGTA | CCGGGTGTTG  | TGGCGGAGGT  |
| 20251 | CGCTTGAGGC  | CATGCTTAGA  | AACGACACCA | ACGACCAGTC  | CTTTAACGAC  |
|       | GCGAACTCCG  | GTACGAATCT  | TTGCTGTGGT | TGCTGGTCAG  | GAAATTGCTG  |
| 20301 | TATCTCTCCG  | CCGCCAACAT  | GCTCTACCCT | ATACCCGCCA  | ACGCTACCAA  |
|       | ATAGAGAGGC  | GGCGGTTGTA  | CGAGATGGGA | TATGGGCGGT  | TGCGATGGTT  |
| 20351 | CGTGCCCAT A | TCCATCCCCT  | CCCGCAACTG | GGCGGCTTTC  | CGCGGCTGGG  |
|       | GCACGGGTAT  | AGGTAGGGGA  | GGGCGTTGAC | CCGCCGAAAG  | GCGCCGACCC  |
| 20401 | CCTTCACGCG  | CCTTAAGACT  | AAGGAAACCC | CATCACTGGG  | CTCGGGCTAC  |
|       | GGAAGTGCGC  | GGAATTCTGA  | TTCCTTTGGG | GTAGTGACCC  | GAGCCCGATG  |
| 20451 | GACCC TTATT | ACACCTACTC  | TGGCTCTATA | CCCTACCTAG  | ATGGAACCTT  |
|       | CTGGGAATAA  | TGTGGATGAG  | ACCGAGATAT | GGGATGGATC  | TACCTTGGAA  |
| 20501 | TTACCTCAAC  | CACACCTTTA  | AGAAGGTGGC | CATTACCTTT  | GACTCTTCTG  |
|       | AATGGAGTTG  | GTGTGGAAAT  | TCTTCCACCG | GTAATGGAAA  | CTGAGAAGAC  |
| 20551 | TCAGCTGGCC  | TGGCAATGAC  | CGCCTGCTTA | CCCCAACGA   | GTTTGAAATT  |
|       | AGTCGACCGG  | ACCGTTACTG  | GCGGACGAAT | GGGGGTTGCT  | CAAAC TTTAA |
| 20601 | AAGCGCTCAG  | TTGACGGGGA  | GGGTTACAAC | GTTGCCCAGT  | GTAACATGAC  |
|       | TTGCGGAGTC  | AACTGCCCT   | CCAATGTTG  | CAACGGGTCA  | CATTGTACTG  |
| 20651 | CAAAGACTGG  | TTCCTGGTAC  | AAATGCTAGC | TAAC TATAAC | ATTGGCTACC  |
|       | GTTTCTGACC  | AAGGACCATG  | TTTACGATCG | ATTGATATTG  | TAACCGATGG  |
| 20701 | AGGGCTTCTA  | TATCCAGAG   | AGCTACAAGG | ACCGCATGTA  | CTCCTTCTTT  |
|       | TCCCGAAGAT  | ATAGGGTCTC  | TCGATGTTCC | TGGCGTACAT  | GAGGAAGAAA  |
| 20751 | AGAAACTTCC  | AGCCCATGAG  | CCGTCAGGTG | GTGGATGATA  | CTAAATACAA  |
|       | TCTTTGAAGG  | TCGGGTACTC  | GGCAGTCCAC | CACCTACTAT  | GATTTATGTT  |

FIG. 16A-26

|       |            |             |             |            |            |
|-------|------------|-------------|-------------|------------|------------|
| 20801 | GGACTACCAA | CAGGTGGGCA  | TCCTACACCA  | ACACAACAAC | TCTGGATTTG |
|       | CCTGATGGTT | GTCCACCCGT  | AGGATGTGGT  | TGTGTTGTTG | AGACCTAAAC |
| 20851 | TTGGCTACCT | TGCCCCCACC  | ATGCGCGAAG  | GACAGGCCTA | CCCTGCTAAC |
|       | AACCGATGGA | ACGGGGGTGG  | TACGCGCTTC  | CTGTCCGGAT | GGGACGATTG |
| 20901 | TTCCCCTATC | CGCTTATAGG  | CAAGACCGCA  | GTTGACAGCA | TTACCCAGAA |
|       | AAGGGGATAG | GCGAATATCC  | GTTCTGGCGT  | CAACTGTCGT | AATGGGTCTT |
| 20951 | AAAGTTTCTT | TGCGATCGCA  | CCCTTTGGCG  | CATCCCATTG | TCCAGTAACT |
|       | TTTCAAAGAA | ACGCTAGCGT  | GGGAAACCGC  | GTAGGGTAAG | AGGTCATTGA |
| 21001 | TTATGTCCAT | GGGCGCACTC  | ACAGACCTGG  | GCCAAAACCT | TCTCTACGCC |
|       | AATACAGGTA | CCGCGGTGAG  | TGTCTGGACC  | CGGTTTGGGA | AGAGATGCGG |
| 21051 | AACTCCGCCC | ACGCGCTAGA  | CATGACTTTT  | GAGGTGGATC | CCATGGACGA |
|       | TTGAGGCGGG | TGCGCGATCT  | GTA CTGAAAA | CTCCACCTAG | GGTACCTGCT |
| 21101 | GCCCACCCTT | CTTTATGTTT  | TGTTTGAAGT  | CTTTGACGTG | GTCCGTGTGC |
|       | CGGGTGGGAA | GAAATACAAA  | ACAAACTTCA  | GAAACTGCAC | CAGGCACACG |
| 21151 | ACCAGCCGCA | CCGCGGCGTC  | ATCGAAACCG  | TGTACCTGCG | CACGCCCTTC |
|       | TGGTCGGCGT | GGCGCCGCAG  | TAGCTTTGGC  | ACATGGACGC | GTGCGGGAAG |
| 21201 | TCGGCCGGCA | ACGCCACAAC  | ATAAAGAAGC  | AAGCAACATC | AACAACAGCT |
|       | AGCCGGCCGT | TGCGGTGTTG  | TATTTCTTCG  | TTCGTTGTAG | TTGTTGTCGA |
| 21251 | GCCGCCATGG | GCTCCAGTGA  | GCAGGAACTG  | AAAGCCATTG | TCAAAGATCT |
|       | CGGCGGTACC | CGAGGTCACT  | CGTCCTTGAC  | TTTCGGTAAC | AGTTTCTAGA |
| 21301 | TGGTTGTGGG | CCATATTTTT  | TGGGCACCTA  | TGACAAGCGC | TTTCCAGGCT |
|       | ACCAACACCC | GGTATAAAAA  | ACCCGTGGAT  | ACTGTTTCGC | AAAGGTCCGA |
| 21351 | TTGTTTCTCC | ACACAAGCTC  | GCCTGCGCCA  | TAGTCAATAC | GGCCGGTTCG |
|       | AACAAAGAGG | TGTGTTTCGAG | CGGACGCGGT  | ATCAGTTATG | CCGGCCAGCG |
| 21401 | GAGACTGGGG | GCGTACACTG  | GATGGCCTTT  | GCCTGGAACC | CGCACTCAAA |
|       | CTCTGACCCC | CGCATGTGAC  | CTACCGGAAA  | CGGACCTTGG | GCGTGAGTTT |
| 21451 | AACATGCTAC | CTCTTTGAGC  | CCTTTGGCTT  | TTCTGACCAG | CGACTCAAGC |
|       | TTGTACGATG | GAGAAACTCG  | GGAAACCGAA  | AAGACTGGTC | GCTGAGTTTC |
| 21501 | AGGTTTACCA | GTTTGAGTAC  | GAGTCACTCC  | TGCGCCGTAG | CGCCATTGCT |
|       | TCCAAATGGT | CAAAC TCATG | CTCAGTGAGG  | ACGCGGCATC | GCGGTAACGA |
| 21551 | TCTTCCCCCG | ACCGCTGTAT  | AACGCTGGAA  | AAGTCCACCC | AAAGCGTACA |
|       | AGAAGGGGGC | TGGCGACATA  | TTGCGACCTT  | TTCAGGTGGG | TTTCGCATGT |

FIG. 16A-27

|       |             |             |            |             |            |
|-------|-------------|-------------|------------|-------------|------------|
| 21601 | GGGGCCCAAC  | TCGGCCGCCT  | GTGGACTATT | CTGCTGCATG  | TTTCTCCACG |
|       | CCCCGGGTTG  | AGCCGGCGGA  | CACCTGATAA | GACGACGTAC  | AAAGAGGTGC |
| 21651 | CCTTTGCCAA  | CTGGCCCCAA  | ACTCCCATGG | ATCACAACCC  | CACCATGAAC |
|       | GGAAACGGTT  | GACCGGGGTT  | TGAGGGTACC | TAGTGTTGGG  | GTGGTACTTG |
| 21701 | CTTATTACCG  | GGGTACCCAA  | CTCCATGCTC | AACAGTCCCC  | AGGTACAGCC |
|       | GAATAATGGC  | CCCATGGGTT  | GAGGTACGAG | TTGTCAGGGG  | TCCATGTCGG |
| 21751 | CACCCTGCGT  | CGCAACCAGG  | AACAGCTCTA | CAGCTTCCTG  | GAGCGCCACT |
|       | GTGGGACGCA  | GCGTTGGTCC  | TTGTCGAGAT | GTCGAAGGAC  | CTCGCGGTGA |
| 21801 | CGCCCTACTT  | CCGCAGCCAC  | AGTGCGCAGA | TTAGGAGCGC  | CACTTCTTTT |
|       | GCGGGATGAA  | GGCGTCGGTG  | TCACGCGTCT | AATCCTCGCG  | GTGAAGAAAA |
| 21851 | TGTCACTTGA  | AAAACATGTA  | AAAATAATGT | ACTAGAGACA  | CTTTCAATAA |
|       | ACAGTGAACT  | TTTTGTACAT  | TTTTATTACA | TGATCTCTGT  | GAAAGTTATT |
| 21901 | AGGCAAATGC  | TTTTATTTGT  | ACACTCTCGG | GTGATTATTT  | ACCCCCACCC |
|       | TCCGTTTACG  | AAAATAAACA  | TGTGAGAGCC | CACTAATAAA  | TGGGGGTGGG |
| 21951 | TTGCCGTCTG  | CGCCGTTTAA  | AAATCAAAGG | GGTCTTGCCG  | CGCATCGCTA |
|       | AACGGCAGAC  | GCGGCAAATT  | TTTAGTTTCC | CCAAGACGGC  | GCGTAGCGAT |
| 22001 | TGCGCCACTG  | GCAGGGACAC  | GTTGCGATAC | TGGTGTTTAG  | TGCTCCACTT |
|       | ACGCGGTGAC  | CGTCCCTGTG  | CAACGCTATG | ACCACAAATC  | ACGAGGTGAA |
| 22051 | AAACTCAGGC  | ACAACCATCC  | GCGGCAGCTC | GGTGAAGTTT  | TCACTCCACA |
|       | TTTGAGTCCG  | TGTTGGTAGG  | CGCCGTCGAG | CCACTTCAAA  | AGTGAGGTGT |
| 22101 | GGCTGCGCAC  | CATCACCAAC  | GCGTTTAGCA | GGTCGGGCGC  | CGATATCTTG |
|       | CCGACGCGTG  | GTAGTGGTTG  | CGAAATCGT  | CCAGCCCGCG  | GCTATAGAAC |
| 22151 | AAGTCGCAGT  | TGGGGCCTCC  | GCCCTGCGCG | CGCGAGTTGC  | GATACACAGG |
|       | TTCAGCGTCA  | ACCCCGGAGG  | CGGGACGCGC | GCGCTCAACG  | CTATGTGTCC |
| 22201 | GTTGCAGCAC  | TGGAACACTA  | TCAGCGCCGG | GTGGTGCACG  | CTGGCCAGCA |
|       | CAACGTCGTG  | ACCTTG TGAT | AGTCGCGGCC | CACCACGTGC  | GACCGGTCGT |
| 22251 | CGCTCTTGTC  | GGAGATCAGA  | TCCGCGTCCA | GGTCCTCCGC  | GTTGCTCAGG |
|       | GCGAGAACAG  | CCTCTAGTCT  | AGGCGCAGGT | CCAGGAGGCG  | CAACGAGTCC |
| 22301 | GCGAACGGAG  | TCAACTTTGG  | TAGCTGCCTT | CCCAAAAAGG  | GCGCGTGCCC |
|       | CGCTTGCCCTC | AGTTGAAACC  | ATCGACGGAA | GGGTTTTTCC  | CGCGCACGGG |
| 22351 | AGGCTTTGAG  | TTGCACTCGC  | ACCGTAGTGG | CATCAAAAAGG | TGACCGTGCC |
|       | TCCGAAACTC  | AACGTGAGCG  | TGGCATCACC | GTAGTTTTCC  | ACTGGCACGG |

FIG. 16A-28

|       |            |            |            |            |             |
|-------|------------|------------|------------|------------|-------------|
| 22401 | CGGTCTGGGC | GTTAGGATAC | AGCGCCTGCA | TAAAAGCCTT | GATCTGCTTA  |
|       | GCCAGACCCG | CAATCCTATG | TCGCGGACGT | ATTTTCGGAA | CTAGACGAAT  |
| 22451 | AAAGCCACCT | GAGCCTTTGC | GCCTTCAGAG | AAGAACATGC | CGCAAGACTT  |
|       | TTTCGGTGGA | CTCGGAAACG | CGGAAGTCTC | TTCTTGACG  | GCGTTCTGAA  |
| 22501 | GCCGGAAAAC | TGATTGGCCG | GACAGGCCGC | GTCGTGCACG | CAGCACCTTG  |
|       | CGGCCTTTTG | ACTAACCGGC | CTGTCCGGCG | CAGCACGTGC | GTCGTGGAAC  |
| 22551 | CGTCGGTGTT | GGAGATCTGC | ACCACATTTT | GGCCCCACCG | GTTCTTCACG  |
|       | GCAGCCACAA | CCTCTAGACG | TGGTGTAAG  | CCGGGGTGGC | CAAGAAGTGC  |
| 22601 | ATCTTGGCCT | TGCTAGACTG | CTCCTTCAGC | GCGCGCTGCC | CGTTTTTCGCT |
|       | TAGAACCGGA | ACGATCTGAC | GAGGAAGTCG | GCGCGACGG  | GCAAAAGCGA  |
| 22651 | CGTCACATCC | ATTTCAATCA | CGTGCTCCTT | ATTTATCATA | ATGCTTCCGT  |
|       | GCAGTGTAGG | TAAAGTTAGT | GCACGAGGAA | TAAATAGTAT | TACGAAGGCA  |
| 22701 | GTAGACACTT | AAGCTCGCCT | TCGATCTCAG | CGCAGCGGTG | CAGCCACAAC  |
|       | CATCTGTGAA | TTCGAGCGGA | AGCTAGAGTC | GCGTCGCCAC | GTCGGTGTTG  |
| 22751 | GCGCAGCCCG | TGGGCTCGTG | ATGCTTGTAG | GTCACCTCTG | CAAACGACTG  |
|       | CGCGTCGGGC | ACCCGAGCAC | TACGAACATC | CAGTGGAGAC | GTTTGCTGAC  |
| 22801 | CAGGTACGCC | TGCAGGAATC | GCCCCATCAT | CGTCACAAAG | GTCTTGTTGC  |
|       | GTCCATGCGG | ACGTCCTTAG | CGGGGTAGTA | GCAGTGTTTC | CAGAACACG   |
| 22851 | TGGTGAAGGT | CAGCTGCAAC | CCGCGGTGCT | CCTCGTTCAG | CCAGGTCTTG  |
|       | ACCACTTCCA | GTCGACGTTG | GGCGCCACGA | GGAGCAAGTC | GGTCCAGAAC  |
| 22901 | CATACGGCCG | CCAGAGCTTC | CACTTGGTCA | GGCAGTAGTT | TGAAGTTCGC  |
|       | GTATGCCGGC | GGTCTCGAAG | GTGAACCAGT | CCGTCATCAA | ACTTCAAGCG  |
| 22951 | CTTTAGATCG | TTATCCACGT | GGTACTTGTC | CATCAGCGCG | CGCGCAGCCT  |
|       | GAAATCTAGC | AATAGGTGCA | CCATGAACAG | GTAGTCGCGC | GCGCGTCGGA  |
| 23001 | CCATGCCCTT | CTCCCACGCA | GACACGATCG | GCACACTCAG | CGGGTTCATC  |
|       | GGTACGGGAA | GAGGGTGCGT | CTGTGCTAGC | CGTGTGAGTC | GCCCAAGTAG  |
| 23051 | ACCGTAATTT | CACTTTCCGC | TTCGCTGGGC | TCTTCCTCTT | CCTCTTGCGT  |
|       | TGGCATTAAT | GTGAAAGGCG | AAGCGACCCG | AGAAGGAGAA | GGAGAACGCA  |
| 23101 | CCGCATACCA | CGCGCCACTG | GGTCGTCTTC | ATTCAGCCGC | CGCACTGTGC  |
|       | GGCGTATGGT | GCGCGGTGAC | CCAGCAGAAG | TAAGTCGGCG | GCGTGACACG  |
| 23151 | GCTTACCTCC | TTTGCCATGC | TTGATTAGCA | CCGGTGGGTT | GCTGAAACCC  |
|       | CGAATGGAGG | AAACGGTACG | AACTAATCGT | GGCCACCCAA | CGACTTTGGG  |

FIG. 16A-29

|       |             |             |            |            |            |
|-------|-------------|-------------|------------|------------|------------|
| 23201 | ACCATTTGTA  | GCGCCACATC  | TTCTCTTTCT | TCCTCGCTGT | CCACGATTAC |
|       | TGGTAAACAT  | CGCGGTGTAG  | AAGAGAAAGA | AGGAGCGACA | GGTGCTAATG |
| 23251 | CTCTGGTGAT  | GGCGGGCGCT  | CGGGCTTGGG | AGAAGGGCGC | TTCTTTTTCT |
|       | GAGACCACTA  | CCGCCC GCGA | GCCCGAACCC | TCTTCCCGCG | AAGAAAAAGA |
| 23301 | TCTTGGGCGC  | AATGGCCAAA  | TCCGCCGCCG | AGGTCGATGG | CCGCGGGCTG |
|       | AGAACCCGCG  | TTACCGGTTT  | AGGCGGCGGC | TCCAGCTACC | GGCGCCCGAC |
| 23351 | GGTGTGCGCG  | GCACCAGCGC  | GTCTTGTGAT | GAGTCTTCCT | CGTCCTCGGA |
|       | CCACACGCGC  | CGTGGTTCGCG | CAGAACACTA | CTCAGAAGGA | GCAGGAGCCT |
| 23401 | CTCGATACGC  | CGCCTCATCC  | GCTTTTTTGG | GGGCGCCCCG | GGAGGCGGCG |
|       | GAGCTATGCG  | GCGGAGTAGG  | CGAAAAAACC | CCCGCGGGCC | CCTCCGCCGC |
| 23451 | GCGACGGGGA  | CGGGGACGAC  | ACGTCTCTCA | TGGTTGGGGG | ACGTCGCGCC |
|       | CGCTGCCCCCT | GCCCCTGCTG  | TGCAGGAGGT | ACCAACCCCC | TGCAGCGCGG |
| 23501 | GCACCGCGTC  | CGCGCTCGGG  | GGTGGTTTCG | CGCTGCTCCT | CTTCCCGACT |
|       | CGTGGCGCAG  | GCGCGAGCCC  | CCACCAAAGC | GCGACGAGGA | GAAGGGCTGA |
| 23551 | GGCCATTTCC  | TTCTCCTATA  | GGCAGAAAAA | GATCATGGAG | TCAGTCGAGA |
|       | CCGGTAAAGG  | AAGAGGATAT  | CCGTCTTTTT | CTAGTACCTC | AGTCAGCTCT |
| 23601 | AGAAGGACAG  | CCTAACCGCC  | CCCTCTGAGT | TCGCCACCAC | CGCCTCCACC |
|       | TCTTCCTGTC  | GGATTGGCGG  | GGGAGACTCA | AGCGGTGGTG | GCGGAGGTGG |
| 23651 | GATGCCGCCA  | ACGCGCCTAC  | CACCTTCCCC | GTCGAGGCAC | CCCCGCTTGA |
|       | CTACGGCGGT  | TGCGCGGATG  | GTGGAAGGGG | CAGCTCCGTG | GGGGCGAACT |
| 23701 | GGAGGAGGAA  | GTGATTATCG  | AGCAGGACCC | AGGTTTTGTA | AGCGAAGACG |
|       | CCTCCTCCTT  | CACTAATAGC  | TCGTCTGGG  | TCCAAAACAT | TCGCTTCTGC |
| 23751 | ACGAGGACCG  | CTCAGTACCA  | ACAGAGGATA | AAAAGCAAGA | CCAGGACAAC |
|       | TGCTCCTGGC  | GAGTCATGGT  | TGTCTCCTAT | TTTTCGTTCT | GGTCCTGTTG |
| 23801 | GCAGAGGCAA  | ACGAGGAACA  | AGTCGGGCGG | GGGGACGAAA | GGCATGGCGA |
|       | CGTCTCCGTT  | TGCTCCTTGT  | TCAGCCCGCC | CCCCTGCTTT | CCGTACCGCT |
| 23851 | CTACCTAGAT  | GTGGGAGACG  | ACGTGCTGTT | GAAGCATCTG | CAGCGCCAGT |
|       | GATGGATCTA  | CACCCTCTGC  | TGCACGACAA | CTTCGTAGAC | GTCGCGGTCA |
| 23901 | GCGCCATTAT  | CTGCGACGCG  | TTGCAAGAGC | GCAGCGATGT | GCCCCTCGCC |
|       | CGCGGTAATA  | GACGCTGCGC  | AACGTTCTCG | CGTCGCTACA | CGGGGAGCGG |
| 23951 | ATAGCGGATG  | TCAGCCTTGC  | CTACGAACGC | CACCTATTCT | CACCGCGCGT |
|       | TATCGCCTAC  | AGTCGGAACG  | GATGCTTGCG | GTGGATAAGA | GTGGCGCGCA |

FIG. 16A-30

|       |            |             |             |            |             |
|-------|------------|-------------|-------------|------------|-------------|
| 24001 | ACCCCCCAA  | CGCCAAGAA   | ACGGCACATG  | CGAGCCCAAC | CCGCGCCTCA  |
|       | TGGGGGGTTT | GCGGTTCCTT  | TGCCGTGTAC  | GCTCGGGTTG | GGCGCGGAGT  |
| 24051 | ACTTCTACCC | CGTATTTGCC  | GTGCCAGAGG  | TGCTTGCCAC | CTATCACATC  |
|       | TGAAGATGGG | GCATAAACGG  | CACGGTCTCC  | ACGAACGGTG | GATAGTGTAG  |
| 24101 | TTTTTCCAAA | ACTGCAAGAT  | ACCCCTATCC  | TGCCGTGCCA | ACGCGAGCCG  |
|       | AAAAAGGTTT | TGACGTTCTA  | TGGGGATAGG  | ACGGCACGGT | TGGCGTCGGC  |
| 24151 | AGCGGACAAG | CAGCTGGCCT  | TGCGGCAGGG  | CGCTGTCATA | CCTGATATCG  |
|       | TCGCCTGTTC | GTCGACCGGA  | ACGCCGTCCC  | GCGACAGTAT | GGACTATAGC  |
| 24201 | CCTCGCTCAA | CGAAGTGCCA  | AAAATCTTTG  | AGGGTCTTGG | ACGCGACGAG  |
|       | GGAGCGAGTT | GCTTCACGGT  | TTTTAGAAAC  | TCCCAGAACC | TGCGCTGCTC  |
| 24251 | AAGCGCGCGG | CAAACGCTCT  | GCAACAGGAA  | AACAGCGAAA | ATGAAAGTCA  |
|       | TTGCGCGGCC | GTTTGCGAGA  | CGTTGTCCTT  | TTGTCGCTTT | TACTTTCAGT  |
| 24301 | CTCTGGAGTG | TTGGTGGAAC  | TCGAGGGTGA  | CAACGCGCGC | CTAGCCGTAC  |
|       | GAGACCTCAC | AACCACCTTG  | AGCTCCCACT  | GTTGCGCGCG | GATCGGCATG  |
| 24351 | TAAAACGCAG | CATCGAGGTC  | ACCCACTTTG  | CCTACCCGGC | ACTTAACCTA  |
|       | ATTTTGCGTC | GTAGCTCCAG  | TGGGTGAAAC  | GGATGGGCCG | TGAATTGGAT  |
| 24401 | CCCCCCAAGG | TCATGAGCAC  | AGTCATGAGT  | GAGCTGATCG | TGCGCCGTGC  |
|       | GGGGGGTTCC | AGTACTCGTG  | TCAGTACTCA  | CTCGACTAGC | ACGCGGCACG  |
| 24451 | GCAGCCCCTG | GAGAGGGGATG | CAAATTTGCA  | AGAACAAACA | GAGGAGGGCC  |
|       | CGTCGGGGAC | CTCTCCCTAC  | GTTTAAACGT  | TCTTGTTTGT | CTCCTCCCGG  |
| 24501 | TACCCGCAGT | TGGCGACGAG  | CAGCTAGCGC  | GCTGGCTTCA | AACGCGCGAG  |
|       | ATGGGCGTCA | ACCGCTGCTC  | GTCGATCGCG  | CGACCGAAGT | TTGCGCGCTC  |
| 24551 | CCTGCCGACT | TGGAGGAGCG  | ACGCAAACCTA | ATGATGGCCG | CAGTGCTCGT  |
|       | GGACGGCTGA | ACCTCCTCGC  | TGCGTTTGAT  | TACTACCGGC | GTCACGAGCA  |
| 24601 | TACCGTGGAG | CTTGAGTGCA  | TGCAGCGGTT  | CTTTGCTGAC | CCGGAGATGC  |
|       | ATGGCACCTC | GAACCTACGT  | ACGTCGCCAA  | GAAACGACTG | GGCCTCTACG  |
| 24651 | AGCGCAAGCT | AGAGGAAACA  | TTGCACTACA  | CCTTTCGACA | GGGCTACGTA  |
|       | TCGCGTTCGA | TCTCCTTTGT  | AACGTGATGT  | GGAAAGCTGT | CCCAGATGCAT |
| 24701 | CGCCAGGCCT | GCAAGATCTC  | CAACGTGGAG  | CTCTGCAACC | TGGTCTCCTA  |
|       | GCGGTCCGGA | CGTTCTAGAG  | GTTGCACCTC  | GAGACGTTGG | ACCAGAGGAT  |
| 24751 | CCTTGGAATT | TTGCACGAAA  | ACCGCCTTGG  | GCAAAACGTG | CTTCATTCCA  |
|       | GGAACCTTAA | AACGTGCTTT  | TGGCGGAACC  | CGTTTTGCAC | GAAGTAAGGT  |

FIG. 16A-31



|       |                          |                          |                           |                          |                          |
|-------|--------------------------|--------------------------|---------------------------|--------------------------|--------------------------|
| 24801 | CGCTCAAGGG<br>GCGAGTTCCC | CGAGGCGCGC<br>GCTCCGCGCG | CGCGACTACG<br>GCGCTGATGC  | TCCGCGACTG<br>AGGCGCTGAC | CGTTTACTTA<br>GCAAATGAAT |
| 24851 | TTTCTATGCT<br>AAAGATACGA | ACACCTGGCA<br>TGTGGACCGT | GACGGCCATG<br>CTGCCGGTAC  | GGCGTTTGGC<br>CCGCAAACCG | AGCAGTGCTT<br>TCGTCACGAA |
| 24901 | GGAGGAGTGC<br>CCTCCTCACG | AACCTCAAGG<br>TTGGAGTTCC | AGCTGCAGAA<br>TCGACGTCTT  | ACTGCTAAAG<br>TGACGATTTC | CAAAACTTGA<br>GTTTTGAACT |
| 24951 | AGGACCTATG<br>TCCTGGATAC | GACGGCCTTC<br>CTGCCGGAAG | AACGAGCGCT<br>TTGCTCGCGA  | CCGTGGCCGC<br>GGCACCGGCG | GCACCTGGCG<br>CGTGGACCGC |
| 25001 | GACATCATTT<br>CTGTAGTAAA | TCCCCGAACG<br>AGGGGCTTGC | CCTGCTTAAA<br>GGACGAATTT  | ACCCTGCAAC<br>TGGGACGTTG | AGGGTCTGCC<br>TCCCAGACGG |
| 25051 | AGACTTCACC<br>TCTGAAGTGG | AGTCAAAGCA<br>TCAGTTTCGT | TGTTGCAGAA<br>ACAACGTCTT  | CTTTAGGAAC<br>GAAATCCTTG | TTTATCCTAG<br>AAATAGGATC |
| 25101 | AGCGCTCAGG<br>TCGCGAGTCC | AATCTTGCCC<br>TTAGAACGGG | GCCACCTGCT<br>CGGTGGACGA  | GTGCACTTCC<br>CACGTGAAGG | TAGCGACTTT<br>ATCGCTGAAA |
| 25151 | GTGCCCATTA<br>CACGGGTAAT | AGTACCGCGA<br>TCATGGCGCT | ATGCCCTCCG<br>TACGGGAGGC  | CCGCTTTGGG<br>GGCGAAACCC | GCCACTGCTA<br>CGGTGACGAT |
| 25201 | CCTTCTGCAG<br>GGAAGACGTC | CTAGCCAACT<br>GATCGGTTGA | ACCTTGCCCTA<br>TGGAACGGAT | CCACTCTGAC<br>GGTGAGACTG | ATAATGGAAG<br>TATTACCTTC |
| 25251 | ACGTGAGCGG<br>TGCACTCGCC | TGACGGTCTA<br>ACTGCCAGAT | CTGGAGTGTC<br>GACCTCACAG  | ACTGTGCTG<br>TGACAGCGAC  | CAACCTATGC<br>GTTGGATACG |
| 25301 | ACCCCGCACC<br>TGGGGCGTGG | GCTCCCTGGT<br>CGAGGGACCA | TTGCAATTCTG<br>AACGTTAAGC | CAGCTGCTTA<br>GTCGACGAAT | ACGAAAGTCA<br>TGCTTTCAGT |
| 25351 | AATTATCGGT<br>TTAATAGCCA | ACCTTTGAGC<br>TGGAAACTCG | TGCAGGGTCC<br>ACGTCCCAGG  | CTCGCCTGAC<br>GAGCGGACTG | GAAAAGTCCG<br>CTTTTCAGGC |
| 25401 | CGGCTCCGGG<br>GCCGAGGCC  | GTTGAAACTC<br>CAACTTTGAG | ACTCCGGGGC<br>TGAGGCCCCG  | TGTGGACGTC<br>ACACCTGCAG | GGCTTACCTT<br>CCGAATGGAA |
| 25451 | CGCAAATTTG<br>GCGTTTAAAC | TACCTGAGGA<br>ATGGACTCCT | CTACCACGCC<br>GATGGTGCGG  | CACGAGATTA<br>GTGCTCTAAT | GGTTCTACGA<br>CCAAGATGCT |
| 25501 | AGACCAATCC<br>TCTGGTTAGG | CGCCCGCCTA<br>GCGGGCGGAT | ATGCGGAGCT<br>TACGCCTCGA  | TACCGCCTGC<br>ATGGCGGACG | GTCATTACCC<br>CAGTAATGGG |
| 25551 | AGGGCCACAT<br>TCCCGGTGTA | TCTTGGCCAA<br>AGAACCGGTT | TTGCAAGCCA<br>AACGTTCCGT  | TCAACAAAGC<br>AGTTGTTTCG | CCGCCAAGAG<br>GGCGGTTCTC |

FIG. 16A-32

|       |                          |                           |                           |                           |                           |
|-------|--------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| 25601 | TTTCTGCTAC<br>AAAGACGATG | GAAAGGGACG<br>CTTTCCTG    | GGGGGTTTAC<br>CCCCCAAATG  | TTGGACCCCC<br>AACCTGGGGG  | AGTCCGGCGA<br>TCAGGCCGCT  |
| 25651 | GGAGCTCAAC<br>CCTCGAGTTG | CCAATCCCCC<br>GGTTAGGGGG  | CGCCGCCGCA<br>GCGGCGGCGT  | GCCCTATCAG<br>CGGGATAGTC  | CAGCAGCCGC<br>GTCGTCGGCG  |
| 25701 | GGGCCCTTGC<br>CCCGGGAACG | TTCCCAGGAT<br>AAGGGTCCTA  | GGCACCCAAA<br>CCGTGGGTTT  | AAGAAGCTGC<br>TTCTTCGACG  | AGCTGCCGCC<br>TCGACGGCGG  |
| 25751 | GCCACCCACG<br>CGGTGGGTGC | GACGAGGAGG<br>CTGCTCCTCC  | AATACTGGGA<br>TTATGACCCT  | CAGTCAGGCA<br>GTCAGTCCGT  | GAGGAGGTTT<br>CTCCTCCAAA  |
| 25801 | TGGACGAGGA<br>ACCTGCTCCT | GGAGGAGGAC<br>CCTCCTCCTG  | ATGATGGAAG<br>TACTACCTTC  | ACTGGGAGAG<br>TGACCCTCTC  | CCTAGACGAG<br>GGATCTGCTC  |
| 25851 | GAAGCTTCCG<br>CTTCGAAGGC | AGGTCGAAGA<br>TCCAGCTTCT  | GGTGTCTAGAC<br>CCACAGTCTG | GAAACACCGT<br>CTTTGTGGCA  | CACCCTCGGT<br>GTGGGAGCCA  |
| 25901 | CGCATTCCCC<br>GCGTAAGGGG | TCGCCGGCGC<br>AGCGGCCGCG  | CCCAGAAATC<br>GGGTCTTTAG  | GGCAACCGGT<br>CCGTTGGCCA  | TCCAGCATGG<br>AGGTCTGTACC |
| 25951 | CTACAACCTC<br>GATGTTGGAG | CGCTCCTCAG<br>GCGAGGAGTC  | GCGCCGCCGG<br>CGCGGCGGCC  | CACTGCCCCGT<br>GTGACGGGCA | TCGCCGACCC<br>AGCGGCTGGG  |
| 26001 | AACCGTAGAT<br>TTGGCATCTA | GGGACACCAC<br>CCCTGTGGTG  | TGGAACCAGG<br>ACCTTGGTCC  | GCCGGTAAGT<br>CGGCCATTCA  | CCAAGCAGCC<br>GGTTCGTCGG  |
| 26051 | GCCGCCGTTA<br>CGGCGGCAAT | GCCCAAGAGC<br>CGGGTTCTCG  | AACAACAGCG<br>TTGTTGTCTG  | CCAAGGCTAC<br>GGTTCCGATG  | CGCTCATGGC<br>GCGAGTACCG  |
| 26101 | GCGGGCACAA<br>CGCCCGTGTT | GAACGCCATA<br>CTTGCGGTAT  | GTTGCTTGCT<br>CAACGAACGA  | TGCAAGACTG<br>ACGTTCTGAC  | TGGGGGCAAC<br>ACCCCGTTG   |
| 26151 | ATCTCCTTCG<br>TAGAGGAAGC | CCCGCCGCTT<br>GGGCGGCGAA  | TCTTCTCTAC<br>AGAAGAGATG  | CATCACGGCG<br>GTAGTGCCGC  | TGGCCTTCCC<br>ACCGGAAGGG  |
| 26201 | CCGTAACATC<br>GGCATTGTAG | CTGCATTACT<br>GACGTAATGA  | ACCGTCATCT<br>TGGCAGTAGA  | CTACAGCCCA<br>GATGTCGGGT  | TACTGCACCG<br>ATGACGTGGC  |
| 26251 | GCGGCAGCGG<br>CGCCGTCGCC | CAGCAACAGC<br>GTCGTTGTCTG | AGCGGCCACA<br>TCGCCGGTGT  | CAGAAGCAAA<br>GTCTTCGTTT  | GGCGACCGGA<br>CCGCTGGCCT  |
| 26301 | TAGCAAGACT<br>ATCGTTCTGA | CTGACAAAGC<br>GACTGTTTCTG | CCAAGAAATC<br>GGTTCTTTAG  | CACAGCGGCG<br>GTGTCGCCGC  | GCAGCAGCAG<br>CGTCGTCGTC  |
| 26351 | GAGGAGGAGC<br>CTCCTCCTCG | GCTGCGTCTG<br>CGACGCAGAC  | GCGCCCAACG<br>CGCGGGTTGC  | AACCCGTATC<br>TTGGGCATAG  | GACCCGCGAG<br>CTGGGCGCTC  |

FIG. 16A-33

|       |             |            |            |            |            |
|-------|-------------|------------|------------|------------|------------|
| 26401 | CTTAGAAACA  | GGATTTTTTC | CACTCTGTAT | GCTATATTTT | AACAGAGCAG |
|       | GAATCTTTGT  | CCTAAAAAGG | GTGAGACATA | CGATATAAAG | TTGTCTCGTC |
| 26451 | GGGCCAAGAA  | CAAGAGCTGA | AAATAAAAAA | CAGGTCTCTG | CGATCCCTCA |
|       | CCCGGTTCTT  | GTTCTCGACT | TTTATTTTTT | GTCCAGAGAC | GCTAGGGAGT |
| 26501 | CCCGCAGCTG  | CCTGTATCAC | AAAAGCGAAG | ATCAGCTTCG | GCGCACGCTG |
|       | GGGCGTCGAC  | GGACATAGTG | TTTTCGCTTC | TAGTCGAAGC | CGCGTGCGAC |
| 26551 | GAAGACGCGG  | AGGCTCTCTT | CAGTAAATAC | TGCGCGCTGA | CTCTTAAGGA |
|       | CTTCTGCGCC  | TCCGAGAGAA | GTCATTTATG | ACGCGCGACT | GAGAATTCCT |
| 26601 | CTAGTTTCGC  | GCCCTTTCTC | AAATTTAAGC | GCGAAACTA  | CGTCATCTCC |
|       | GATCAAAGCG  | CGGGAAAGAG | TTTAAATTCG | CGCTTTTGAT | GCAGTAGAGG |
| 26651 | AGCGGCCACA  | CCCGGCGCCA | GCACCTGTTG | TCAGCGCCAT | TATGAGCAAG |
|       | TCGCCGGTGT  | GGGCCGCGGT | CGTGGACAAC | AGTCGCGGTA | ATACTCGTTC |
| 26701 | GAAATTCCCA  | CGCCCTACAT | GTGGAGTTAC | CAGCCACAAA | TGGGACTTGC |
|       | CTTTAAGGGT  | GCGGGATGTA | CACCTCAATG | GTGCGTGTTT | ACCCTGAACG |
| 26751 | GGCTGGAGCT  | GCCCAAGACT | ACTCAACCCG | AATAAACTAC | ATGAGCGCGG |
|       | CCGACCTCGA  | CGGGTTCTGA | TGAGTTGGGC | TTATTTGATG | TACTCGCGCC |
| 26801 | GACCCACAT   | GATATCCCGG | GTCAACGGAA | TACGCGCCCA | CCGAAACCGA |
|       | CTGGGGTGTA  | CTATAGGGCC | CAGTTGCCTT | ATGCGCGGGT | GGCTTTGGCT |
| 26851 | ATTCTCCTGG  | AACAGGCGGC | TATTACCACC | ACACCTCGTA | ATAACCTTAA |
|       | TAAGAGGACC  | TTGTCCGCCG | ATAATGGTGG | TGTGGAGCAT | TATTGGAATT |
| 26901 | TCCCCGTAAGT | TGGCCCGCTG | CCCTGGTGTA | CCAGGAAAGT | CCCGCTCCCA |
|       | AGGGGCATCA  | ACCGGGCGAC | GGGACCACAT | GGTCCTTTCA | GGGCGAGGGT |
| 26951 | CCACTGTGGT  | ACTTCCCAGA | GACGCCCAGG | CCGAAGTTCA | GATGACTAAC |
|       | GGTGACACCA  | TGAAGGGTCT | CTGCGGGTCC | GGCTTCAAGT | CTACTGATTG |
| 27001 | TCAGGGGCGC  | AGCTTGCGGG | CGGCTTTCGT | CACAGGGTGC | GGTCGCCCCG |
|       | AGTCCCCGCG  | TCGAACGCC  | GCCGAAAGCA | GTGTCCACG  | CCAGCGGGCC |
| 27051 | GCAGGGTATA  | ACTCACCTGA | CAATCAGAGG | GCGAGGTATT | CAGCTCAACG |
|       | CGTCCCATAT  | TGAGTGGACT | GTTAGTCTCC | CGCTCCATAA | GTGAGTTGTC |
| 27101 | ACGAGTCGGT  | GAGCTCCTCG | CTTGGTCTCC | GTCCGGACGG | GACATTTTCA |
|       | TGCTCAGCCA  | CTCGAGGAGC | GAACCAGAGG | CAGGCCTGCC | CTGTAAAGTC |
| 27151 | ATCGGCGGCG  | CCGGCCGCTC | TTCATTACAG | CCTCGTCAGG | CAATCCTAAC |
|       | TAGCCGCCGC  | GGCCGGCGAG | AAGTAAGTGC | GGAGCAGTCC | GTTAGGATTG |

FIG. 16A-34

|       |             |             |            |            |             |
|-------|-------------|-------------|------------|------------|-------------|
| 27201 | TCTGCAGACC  | TCGTCCTCTG  | AGCCGCGCTC | TGGAGGCATT | GGAACCTCTGC |
|       | AGACGTCTGG  | AGCAGGAGAC  | TCGGCGCGAG | ACCTCCGTAA | CCTTGAGACG  |
| 27251 | AATTTATTGA  | GGAGTTTGTG  | CCATCGGTCT | ACTTTAACCC | CTTCTCGGGA  |
|       | TTAAATAACT  | CCTCAAACAC  | GGTAGCCAGA | TGAAATTGGG | GAAGAGCCCT  |
| 27301 | CCTCCCGGCC  | ACTATCCGGA  | TCAATTTATT | CCTAACTTTG | ACGCGGTAAA  |
|       | GGAGGGCCGG  | TGATAGGCCT  | AGTTAAATAA | GGATTGAAAC | TGCGCCATTT  |
| 27351 | GGACTCGGCG  | GACGGCTACG  | ACTGAATGTT | AAGTGGAGAG | GCAGAGCAAC  |
|       | CCTGAGCCGC  | CTGCCGATGC  | TGACTTACAA | TTCACCTCTC | CGTCTCGTTG  |
| 27401 | TGCGCCTGAA  | ACACCTGGTC  | CACTGTCGCC | GCCACAAGTG | CTTTGCCCGC  |
|       | ACGCGGACTT  | TGTGGACCAG  | GTGACAGCGG | CGGTGTTTAC | GAAACGGGCG  |
| 27451 | GACTCCGGTG  | AGTTTTGCTA  | CTTTGAATTG | CCCGAGGATC | ATATCGAGGG  |
|       | CTGAGGCCAC  | TCAAAACGAT  | GAAACTTAAC | GGGCTCCTAG | TATAGCTCCC  |
| 27501 | CCCGGCGCAC  | GGCGTCCGGC  | TTACCGCCCA | GGGAGAGCTT | GCCCGTAGCC  |
|       | GGGCCGCGTG  | CCGCAGGCCG  | AATGGCGGGT | CCCTCTCGAA | CGGGCATCGG  |
| 27551 | TGATTCGGGA  | GTTTACCCAG  | CGCCCCCTGC | TAGTTGAGCG | GGACAGGGGA  |
|       | ACTAAGCCCT  | CAAATGGGTC  | GCGGGGGACG | ATCAACTCGC | CCTGTCCCCT  |
| 27601 | CCCTGTGTTT  | TCACTGTGAT  | TTGCAACTGT | CCTAACCCTG | GATTACATCA  |
|       | GGGACACAAG  | AGTGACACTA  | AACGTTGACA | GGATTGGGAC | CTAATGTAGT  |
| 27651 | AGATCTTTGT  | TGCCATCTCT  | GTGCTGAGTA | TAATAAATAC | AGAAATTAAA  |
|       | TCTAGAAACA  | ACGGTAGAGA  | CACGACTCAT | ATTATTTATG | TCTTTAATTT  |
| 27701 | ATATACTGGG  | GTCCTATCG   | CCATCCTGTA | AACGCCACCG | TCTTCACCCG  |
|       | TATATGACCC  | CGAGGATAGC  | GGTAGGACAT | TTGCGGTGGC | AGAAGTGGGC  |
| 27751 | CCCAAGCAAA  | CCAAGGCGAA  | CCTTACCTGG | TACTTTTAAC | ATCTCTCCCT  |
|       | GGGTTTCGTTT | GGTTCCGCTT  | GGAATGGACC | ATGAAAATTG | TAGAGAGGGA  |
| 27801 | CTGTGATTTA  | CAACAGTTTC  | AACCCAGACG | GAGTGAGTCT | ACGAGAGAAC  |
|       | GACACTAAAT  | GTTGTCAAAG  | TTGGGTCTGC | CTCACTCAGA | TGCTCTCTTG  |
| 27851 | CTCTCCGAGC  | TCAGCTACTC  | CATCAGAAAA | AACACCACCC | TCCTTACCTG  |
|       | GAGAGGCTCG  | AGTCGATGAG  | GTAGTCTTTT | TTGTGGTGGG | AGGAATGGAC  |
| 27901 | CCGGGAACGT  | ACGAGTGCGT  | CACCGGCCGC | TGCACCACAC | CTACCGCCTG  |
|       | GGCCCTTGCA  | TGCTCACGCA  | GTGGCCGGCG | ACGTGGTGTG | GATGGCGGAC  |
| 27951 | ACCGTAAACC  | AGACTTTTTTC | CGGACAGACC | TCAATAACTC | TGTTTACCAG  |
|       | TGGCATTTTG  | TCTGAAAAAG  | GCCTGTCTGG | AGTTATTGAG | ACAAATGGTC  |

FIG. 16A-35

|       |                          |                          |                          |                          |                           |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|
| 28001 | AACAGGAGGT<br>TTGTCCTCCA | GAGCTTAGAA<br>CTCGAATCTT | AACCCTTAGG<br>TTGGGAATCC | GTATTAGGCC<br>CATAATCCGG | AAAGGCGCAG<br>TTTCCGCGTC  |
| 28051 | CTACTGTGGG<br>GATGACACCC | GTTTATGAAC<br>CAAATACTTG | AATTCAAGCA<br>TTAAGTTCGT | ACTCTACGGG<br>TGAGATGCCC | CTATTCTAAT<br>GATAAGATTA  |
| 28101 | TCAGGTTTCT<br>AGTCCAAAGA | CTAGAATCGG<br>GATCTTAGCC | GGTTGGGGTT<br>CCAACCCCAA | ATTCTCTGTC<br>TAAGAGACAG | TTGTGATTCT<br>AACACTAAGA  |
| 28151 | CTTTATTCTT<br>GAAATAAGAA | ATACTAACGC<br>TATGATTGCG | TTCTCTGCCT<br>AAGAGACGGA | AAGGCTCGCC<br>TTCCGAGCGG | GCCTGCTGTG<br>CGGACGACAC  |
| 28201 | TGCACATTTG<br>ACGTGTAAAC | CATTTATTGT<br>GTAAATAACA | CAGCTTTTTA<br>GTCGAAAAT  | AACGCTGGGG<br>TTGCGACCCC | TCGCCACCCA<br>AGCGGTGGGT  |
| 28251 | AGATGATTAG<br>TCTACTAATC | GTACATAATC<br>CATGTATTAG | CTAGGTTTAC<br>GATCCAAATG | TCACCCTTGC<br>AGTGGGAACG | GTCAGCCCAC<br>CAGTCGGGTG  |
| 28301 | GGTACCACCC<br>CCATGGTGGG | AAAAGGTGGA<br>TTTTCCACCT | TTTTAAGGAG<br>AAAATTCCTC | CCAGCCTGTA<br>GGTCGGACAT | ATGTTACATT<br>TACAATGTAA  |
| 28351 | CGCAGCTGAA<br>GCGTCGACTT | GCTAATGAGT<br>CGATTACTCA | GCACCACTCT<br>CGTGGTGAGA | TATAAAATGC<br>ATATTTTACG | ACCACAGAAC<br>TGGTGTCTTG  |
| 28401 | ATGAAAAGCT<br>TACTTTTCGA | GCTTATTCGC<br>CGAATAAGCG | CACAAAAACA<br>GTGTTTTTGT | AAATTGGCAA<br>TTTAACCGTT | GSTATGCTGTT<br>CATACGACAA |
| 28451 | TATGCTATTT<br>ATACGATAAA | GGCAGCCAGG<br>CCGTCGGTCC | TGACACTACA<br>ACTGTGATGT | GAGTATAATG<br>CTCATATTAC | TTACAGTTTT<br>AATGTCAAAA  |
| 28501 | CCAGGGTAAA<br>GGTCCCATTT | AGTCATAAAA<br>TCAGTATTTT | CTTTTATGTA<br>GAAAATACAT | TACTTTTCCA<br>ATGAAAAGGT | TTTTATGAAA<br>AAAATACTTT  |
| 28551 | TGTGCGACAT<br>ACACGCTGTA | TACCATGTAC<br>ATGGTACATG | ATGAGCAAAC<br>TACTCGTTTG | AGTATAAGTT<br>TCATATTCAA | GTGGCCCCCA<br>CACCGGGGGT  |
| 28601 | CAAAATTGTG<br>GTTTTAACAC | TGGAAACAC<br>ACCTTTTGTG  | TGGCACTTTC<br>ACCGTGAAAG | TGCTGCACTG<br>ACGACGTGAC | CTATGCTAAT<br>GATACGATTA  |
| 28651 | TACAGTGCTC<br>ATGTCACGAG | GCTTTGGTCT<br>CGAAACCAGA | GTACCCTACT<br>CATGGGATGA | CTATATTAAA<br>GATATAATTT | TACAAAAGCA<br>ATGTTTTTCGT |
| 28701 | GACGCAGCTT<br>CTGCGTCGAA | TATTGAGGAA<br>ATAACTCCTT | AAGAAAATGC<br>TTCTTTTACG | CTTAATTTAC<br>GAATTAAATG | TAAGTTACAA<br>ATTCAATGTT  |
| 28751 | AGCTAATGTC<br>TCGATTACAG | ACCACTAACT<br>TGGTGATTGA | GCTTTACTCG<br>CGAAATGAGC | CTGCTTGCAA<br>GACGAACGTT | AACAAATTCA<br>TTGTTTAAAGT |

FIG. 16A-36

|       |                          |                          |                          |                          |                           |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|
| 28801 | AAAAGTTAGC<br>TTTTCAATCG | ATTATAATTA<br>TAATATTAAT | GAATAGGATT<br>CTTATCCTAA | TAAACCCCCC<br>ATTTGGGGGG | GGTCATTTCC<br>CCAGTAAAGG  |
| 28851 | TGCTCAATAC<br>ACGAGTTATG | CATTCCCCTG<br>GTAAGGGGAC | AACAATTGAC<br>TTGTTAACTG | TCTATGTGGG<br>AGATACACCC | ATATGCTCCA<br>TATACGAGGT  |
| 28901 | GCGCTACAAC<br>CGCGATGTTG | CTTGAAGTCA<br>GAACTTCAGT | GGCTTCCTGG<br>CCGAAGGACC | ATGTCAGCAT<br>TACAGTCGTA | CTGACTTTGG<br>GACTGAAACC  |
| 28951 | CCAGCACCTG<br>GGTCGTGGAC | TCCCGCGGAT<br>AGGGCGCCTA | TTGTTCCAGT<br>AACAAGGTCA | CCAACTACAG<br>GGTTGATGTC | CGACCCACCC<br>GCTGGGTGGG  |
| 29001 | TAACAGAGAT<br>ATTGTCTCTA | GACCAACACA<br>CTGGTTGTGT | ACCAACGCGG<br>TGTTTGCGCC | CCGCCGCTAC<br>GGCGGCGATG | CGGACTTACA<br>GCCTGAATGT  |
| 29051 | TCTACCACAA<br>AGATGGTGTT | ATACACCCCA<br>TATGTGGGGT | AGTTTCTGCC<br>TCAAAGACGG | TTTGTCAATA<br>AAACAGTTAT | ACTGGGATAA<br>TGACCCTATT  |
| 29101 | CTTGGGCATG<br>GAACCCGTAC | TGGTGGTTCT<br>ACCACCAAGA | CCATAGCGCT<br>GGTATCGCGA | TATGTTTGTA<br>ATACAAACAT | TGCCTTATTA<br>ACGGAATAAT  |
| 29151 | TTATGTGGCT<br>AATACACCGA | CATCTGCTGC<br>GTAGACGACG | CTAAAGCGCA<br>GATTTGCGGT | AACGCGCCCG<br>TTGCGCGGGC | ACCACCCATC<br>TGGTGGGTAG  |
| 29201 | TATAGTCCCA<br>ATATCAGGGT | TCATTGTGCT<br>AGTAACACGA | ACACCCAAAC<br>TGTGGGTTTG | AATGATGGAA<br>TTACTACCTT | TCCATAGATT<br>AGGTATCTAA  |
| 29251 | GGACGGACTG<br>CCTGCCTGAC | AAACACATGT<br>TTTGTGTACA | TCTTTTCTCT<br>AGAAAAGAGA | TACAGTATGA<br>ATGTCATACT | TTAAATGAGA<br>AATTTACTCT  |
| 29301 | CATGATTCCT<br>GTACTAAGGA | CGAGTTTTTA<br>GCTCAAAAAT | TATTACTGAC<br>ATAATGACTG | CCTTGTTGCG<br>GGAACAACGC | CTTTTTTTGTG<br>GAAAAAACAC |
| 29351 | CGTGCTCCAC<br>GCACGAGGTG | ATTGGCTGCG<br>TAACCGACGC | GTTTCTCACA<br>CAAAGAGTGT | TCGAAGTAGA<br>AGCTTCATCT | CTGCATTCCA<br>GACGTAAGGT  |
| 29401 | GCCTTCACAG<br>CGGAAGTGTC | TCTATTTGCT<br>AGATAAACGA | TTACGGATTT<br>AATGCCTAAA | GTCACCCTCA<br>CAGTGGGAGT | CGCTCATCTG<br>GCGAGTAGAC  |
| 29451 | CAGCCTCATC<br>GTCGGAGTAG | ACTGTGGTCA<br>TGACACCAGT | TCGCCTTTAT<br>AGCGGAAATA | CCAGTGCATT<br>GGTCACGTAA | GACTGGGTCT<br>CTGACCCAGA  |
| 29501 | GTGTGCGCTT<br>CACACGCGAA | TGCATATCTC<br>ACGTATAGAG | AGACACCATC<br>TCTGTGGTAG | CCCAGTACAG<br>GGGTCATGTC | GGACAGGACT<br>CCTGTCCTGA  |
| 29551 | ATAGCTGAGC<br>TATCGACTCG | TTCTTAGAAT<br>AAGAATCTTA | TCTTTAATTA<br>AGAAATTAAT | TGAAATTTAC<br>ACTTTAAATG | TGTGACTTTT<br>ACACTGAAAA  |

FIG. 16A-37

|       |            |            |             |            |             |
|-------|------------|------------|-------------|------------|-------------|
| 29601 | CTGCTGATTA | TTTGCACCTT | ATCTGCGTTT  | TGTTCCCCGA | CCTCCAAGCC  |
|       | GACGACTAAT | AAACGTGGGA | TAGACGCAA   | ACAAGGGGCT | GGAGGTTCGG  |
| 29651 | TCAAAGACAT | ATATCATGCA | GATTCACCTCG | TATATGGAAT | ATTCCAAGTT  |
|       | AGTTTCTGTA | TATAGTACGT | CTAAGTGAGC  | ATATACCTTA | TAAGGTTCAG  |
| 29701 | GCTACAATGA | AAAAAGCGAT | CTTTCCGAAG  | CCTGGTTATA | TGCAATCATC  |
|       | CGATGTTACT | TTTTTCGCTA | GAAAGGCTTC  | GGACCAATAT | ACGTTAGTAG  |
| 29751 | TCTGTTATGG | TGTTCTGCAG | TACCATCTTA  | GCCCTAGCTA | TATATCCCTA  |
|       | AGACAATACC | ACAAGACGTC | ATGGTAGAAT  | CGGGATCGAT | ATATAGGGAT  |
| 29801 | CCTTGACATT | GGCTGGAACG | CAATAGATGC  | CATGAACCAC | CCAACCTTCC  |
|       | GGAACGTGTA | CCGACCTTGC | GTTATCTACG  | GTACTTGGTG | GGTTGAAAGG  |
| 29851 | CCGCGCCCGC | TATGCTTCCA | CTGCAACAAG  | TTGTTGCCGG | CGGCTTTGTC  |
|       | GGCGCGGGCG | ATACGAAGGT | GACGTTGTTC  | AACAACGGCC | GCCGAAACAG  |
| 29901 | CCAGCCAATC | AGCCTCGCCC | ACCTTCTCCC  | ACCCCCACTG | AAATCAGCTA  |
|       | GGTCGGTTAG | TCGGAGCGGG | TGGAAGAGGG  | TGGGGGTGAC | TTTAGTCGAT  |
| 29951 | CTTTAATCTA | ACAGGAGGAG | ATGACTGACA  | CCCTAGATCT | AGAAATGGAC  |
|       | GAAATTAGAT | TGTCCTCCTC | TACTGACTGT  | GGGATCTAGA | TCTTTACCTG  |
| 30001 | GGAATTATTA | CAGAGCAGCG | CCTGCTAGAA  | AGACGCAGGG | CAGCGGCCGA  |
|       | CCTTAATAAT | GTCTCGTCGC | GGACGATCTT  | TCTGCGTCCC | GTGCGCGGCT  |
| 30051 | GCAACAGCGC | ATGAATCAAG | AGCTCCAAGA  | CATGGTTAAC | TTGCACCAAGT |
|       | CGTTGTCGCG | TACTTAGTTC | TCGAGGTTCT  | GTACCAATTG | AACGTGGTCA  |
| 30101 | GCAAAAGGGG | TATCTTTTGT | CTCGTAAAGC  | AGGCCAAAGT | CACCTACGAC  |
|       | CGTTTTCCCC | ATAGAAAACA | GAGCATTTTCG | TCCGGTTTCA | GTGGATGCTG  |
| 30151 | AGTAATACCA | CCGGACACCG | CCTTAGCTAC  | AAGTTGCCAA | CCAAGCGTCA  |
|       | TCATTATGGT | GGCCTGTGGC | GGAATCGATG  | TTCAACGGTT | GGTTCGCAGT  |
| 30201 | GAAATTGGTG | GTCATGGTGG | GAGAAAAGCC  | CATTACCATA | ACTCAGCACT  |
|       | CTTTAACCAC | CAGTACCACC | CTCTTTTCGG  | GTAATGGTAT | TGAGTCGTGA  |
| 30251 | CGGTAGAAAC | CGAAGGCTGC | ATTCACCTAC  | CTTGTCAAGG | ACCTGAGGAT  |
|       | GCCATCTTTG | GCTTCCGACG | TAAGTGAGTG  | GAACAGTTCC | TGGACTCCTA  |
| 30301 | CTCTGCACCC | TTATTAAGAC | CCTGTGCGGT  | CTCAAAGATC | TTATTCCCTT  |
|       | GAGACGTGGG | AATAATTCTG | GGACACGCCA  | GAGTTTCTAG | AATAAGGGAA  |
| 30351 | TAACTAATAA | AAAAAAATAA | TAAAGCATCA  | CTTACTTAAA | ATCAGTTAGC  |
|       | ATTGATTATT | TTTTTTTATT | ATTCGCTAGT  | GAATGAATTT | TAGTCAATCG  |

FIG. 16A-38

|       |                          |                          |                           |                           |                           |
|-------|--------------------------|--------------------------|---------------------------|---------------------------|---------------------------|
| 30401 | AAATTTCTGT<br>TTTAAAGACA | CCAGTTTATT<br>GGTCAAATAA | CAGCAGCACC<br>GTCGTCGTGG  | TCCTTGCCCT<br>AGGAACGGGA  | CCTCCCAGCT<br>GGAGGGTCTGA |
| 30451 | CTGGTATTGC<br>GACCATAACG | AGCTTCCTCC<br>TCGAAGGAGG | TGGCTGCAAA<br>ACCGACGTTT  | CTTTCCTCCAC<br>GAAAGAGGTG | AATCTAAATG<br>TTAGATTTAC  |
| 30501 | GAATGTCAGT<br>CTTACAGTCA | TTCCTCCTGT<br>AAGGAGGACA | TCCTGTCCAT<br>AGGACAGGTA  | CCGCACCCAC<br>GGCGTGGGTG  | TATCTTCATG<br>ATAGAAGTAC  |
| 30551 | TTGTTGCAGA<br>AACAACGTCT | TGAAGCGCGC<br>ACTTCGCGCG | AAGACCGTCT<br>TTCTGGCAGA  | GAAGATACCT<br>CTTCTATGGA  | TCAACCCCGT<br>AGTTGGGGCA  |
| 30601 | GTATCCATAT<br>CATAGGTATA | GACACGGAAA<br>CTGTGCCTTT | CCGGTCCTCC<br>GGCCAGGAGG  | AACTGTGCCT<br>TTGACACGGA  | TTTCTTACTC<br>AAAGAATGAG  |
| 30651 | CTCCCTTTGT<br>GAGGGAAACA | ATCCCCCAAT<br>TAGGGGGTTA | GGGTTTCAAG<br>CCCAAAGTTC  | AGAGTCCCCC<br>TCTCAGGGGG  | TGGGGTACTC<br>ACCCCATGAG  |
| 30701 | TCTTTGCGCC<br>AGAAACGCGG | TATCCGAACC<br>ATAGGCTTGG | TCTAGTTACC<br>AGATCAATGG  | TCCAATGGCA<br>AGGTTACCGT  | TGCTTGCGCT<br>ACGAACGCGA  |
| 30751 | CAAAATGGGC<br>GTTTTACCCG | AACGGCCTCT<br>TTGCCGGAGA | CTCTGGACGA<br>GAGACCTGCT  | GGCCGGCAAC<br>CCGGCCGTTG  | CTTACCTCCC<br>GAATGGAGGG  |
| 30801 | AAAATGTAAC<br>TTTTACATTG | CACTGTGAGC<br>GTGACACTCG | CCACCTCTCA<br>GGTGGAGAGT  | AAAAAACCAA<br>TTTTTTGGTT  | GTCAAACATA<br>CAGTTTGTAT  |
| 30851 | AACCTGGAAG<br>TTGGACCTTT | TATCTGCACC<br>ATAGACGTGG | CCTCACAGTT<br>GGAGTGTCAG  | ACCTCAGAAG<br>TGGAGTCTTC  | CCCTAACTGT<br>GGGATTGACA  |
| 30901 | GGCTGCCGCC<br>CCGACGGCGG | GCACCTCTAA<br>CGTGGAGATT | TGGTCGCGGG<br>ACCAGCGCCC  | CAACACACTC<br>GTTGTGTGAG  | ACCATGCAAT<br>TGGTACGTTA  |
| 30951 | CACAGGCCCC<br>GTGTCCGGGG | GCTAACCGTG<br>CGATTGGCAC | CACGACTCCA<br>GTGCTGAGGT  | AACTTAGCAT<br>TTGAATCGTA  | TGCCACCCAA<br>ACGGTGGGTT  |
| 31001 | GGACCCCTCA<br>CCTGGGGAGT | CAGTGTCAGA<br>GTCACAGTCT | AGGAAAGCTA<br>TCCTTTCGAT  | GCCCTGCAAA<br>CGGGACGTTT  | CATCAGGCCC<br>GTAGTCCGGG  |
| 31051 | CCTCACCACC<br>GGAGTGGTGG | ACCGATAGCA<br>TGGCTATCGT | GTACCCTTAC<br>CATGGGAATG  | TATCACTGCC<br>ATAGTGACGG  | TCACCCCTT<br>AGTGGGGGAA   |
| 31101 | TAATACTGTC<br>ATTGATGACG | CACTGGTAGC<br>GTGACCATCG | TTGGGCATTG<br>AACCCGTAAC  | ACTTGAAAGA<br>TGAACCTTCT  | GCCCATTAT<br>CGGGTAAATA   |
| 31151 | ACACAAAATG<br>TGTGTTTTAC | GAAAACTAGG<br>CTTTTGATCC | ACTAAAGTAC<br>TGATTTTCATG | GGGGCTCCTT<br>CCCCGAGGAA  | TGCATGTAAC<br>ACGTACATTG  |

FIG. 16A-39



|       |                          |                          |                          |                           |                            |
|-------|--------------------------|--------------------------|--------------------------|---------------------------|----------------------------|
| 31201 | AGACGACCTA<br>TCTGCTGGAT | AACACTTTGA<br>TTGTGAAACT | CCGTAGCAAC<br>GGCATCGTTG | TGGTCCAGGT<br>ACCAGGTCCA  | GTGACTATTA<br>CACTGATAAT   |
| 31251 | ATAATACTTC<br>TATTATGAAG | CTTGCAAAC<br>GAACGTTTGA  | AAAGTTACTG<br>TTTCAATGAC | GAGCCTTGGG<br>CTCGGAACCC  | TTTTGATTCA<br>AAAACATAAGT  |
| 31301 | CAAGGCAATA<br>GTTCCGTTAT | TGCAACTTAA<br>ACGTTGAATT | TGTAGCAGGA<br>ACATCGTCCT | GGACTAAGGA<br>CCTGATTCCCT | TTGATTCTCA<br>AACTAAGAGT   |
| 31351 | AAACAGACGC<br>TTTGTCTGCG | CTTATACTTG<br>GAATATGAAC | ATGTTAGTTA<br>TACAATCAAT | TCCGTTTGAT<br>AGGCAAACCTA | GCTCAAAACC<br>CGAGTTTTTG   |
| 31401 | AACTAAATCT<br>TTGATTTAGA | AAGACTAGGA<br>TTCTGATCCT | CAGGGCCCTC<br>GTCCCGGGAG | TTTTTATAAA<br>AAAAATATTT  | CTCAGCCCAC<br>GAGTCGGGTG   |
| 31451 | AACTTGGATA<br>TTGAACCTAT | TTAACTACAA<br>AATTGATGTT | CAAAGGCCTT<br>GTTTCCGGAA | TACTTGTTTA<br>ATGAACAAAT  | CAGCTTCAAA<br>GTCGAAGTTT   |
| 31501 | CAATTCCAAA<br>GTTAAGGTTT | AAGCTTGAGG<br>TTCGAACTCC | TTAACCTAAG<br>AATTGGATTC | CACTGCCAAG<br>GTGACGGTTC  | GGGTTGATGT<br>CCCAACTACA   |
| 31551 | TTGACGCTAC<br>AACTGCGATG | AGCCATAGCC<br>TCGGTATCGG | ATTAATGCAG<br>TAATTACGTC | GAGATGGGCT<br>CTCTACCCGA  | TGAATTTGGT<br>ACTTAAACCA   |
| 31601 | TCACCTAATG<br>AGTGGATTAC | CACCAAACAC<br>GTGGTTTGTG | AAATCCCCTC<br>TTTAGGGGAG | AAAACAAAAA<br>TTTTGTTTTT  | TTGGCCATGG<br>AACCGGTACC   |
| 31651 | CCTAGAATTT<br>GGATCTTAAA | GATTCAAACA<br>CTAAGTTTGT | AGGCTATGGT<br>TCCGATACCA | TCCTAAACTA<br>AGGATTTGAT  | GGAAC TG GCC<br>CCTTGACCGG |
| 31701 | TTAGTTTTGA<br>AATCAAACT  | CAGCACAGGT<br>GTCGTGTCCA | GCCATTACAG<br>CGGTAATGTC | TAGGAAACAA<br>ATCCTTTGTT  | AAATAATGAT<br>TTTATTACTA   |
| 31751 | AAGCTAACTT<br>TTCGATTGAA | TGTGGACCAC<br>ACACCTGGTG | ACCAGCTCCA<br>TGGTCGAGGT | TCTCCTAACT<br>AGAGGATTGA  | GTAGACTAAA<br>CATCTGATTT   |
| 31801 | TGCAGAGAAA<br>ACGTCTCTTT | GATGCTAAAC<br>CTACGATTTG | TCACTTTGGT<br>AGTGAAACCA | CTTAACAAAA<br>GAATTGTTTT  | TGTGGCAGTC<br>ACACCGTCAG   |
| 31851 | AAATACTTGC<br>TTTATGAACG | TACAGTTTCA<br>ATGTCAAAGT | GTTTTGGCTG<br>CAAAACCGAC | TTAAAGGCAG<br>AATTTCCGTC  | TTTGGCTCCA<br>AAACCGAGGT   |
| 31901 | ATATCTGGAA<br>TATAGACCTT | CAGTTCAAAG<br>GTCAAGTTTC | TGCTCATCTT<br>ACGAGTAGAA | ATTATAAGAT<br>TAATATTCTA  | TTGACGAAAA<br>AACTGCTTTT   |
| 31951 | TGGAGTGCTA<br>ACCTCACGAT | CTAAACAATT<br>GATTTGTTAA | CCTTCCTGGA<br>GGAAGGACCT | CCCAGAATAT<br>GGGTCTTATA  | TGGAAC TTTA<br>ACCTTGAAAT  |

FIG. 16A-40

|       |            |            |            |             |             |
|-------|------------|------------|------------|-------------|-------------|
| 32001 | GAAATGGAGA | TCTTACTGAA | GGCACAGCCT | ATACAAACGC  | TGTTGGATTT  |
|       | CTTTACCTCT | AGAATGACTT | CCGTGTCGGA | TATGTTTGCG  | ACAACCTAAA  |
| 32051 | ATGCCTAACC | TATCAGCTTA | TCCAAAATCT | CACGGTAAAA  | CTGCCAAAAG  |
|       | TACGGATTGG | ATAGTCGAAT | AGGTTTTAGA | GTGCCATTTT  | GACGGTTTTC  |
| 32101 | TAACATTGTC | AGTCAAGTTT | ACTTAAACGG | AGACAAAAC   | AAACCTGTAA  |
|       | ATTGTAACAG | TCAGTTCAAA | TGAATTGACC | TCTGTTTTGA  | TTTGGACATT  |
| 32151 | CACTAACCAT | TACACTAAAC | GGTACACAGG | AAACAGGAGA  | CACAACTCCA  |
|       | GTGATTGGTA | ATGTGATTTG | CCATGTGTCC | TTTGTCTCT   | GTGTTGAGGT  |
| 32201 | AGTGCATACT | CTATGTCATT | TTCATGGGAC | TGGTCTGGCC  | ACAACCTACAT |
|       | TCACGTATGA | GATACAGTAA | AAGTACCCTG | ACCAGACCGG  | TGTTGATGTA  |
| 32251 | TAATGAAATA | TTTGCCACAT | CCTCTTACAC | TTTTTCATAC  | ATTGCCCAAG  |
|       | ATTACTTTAT | AAACGGTGTA | GGAGAATGTG | AAAAAGTATG  | TAACGGGTTT  |
| 32301 | AATAAAGAAT | CGTTTGTGTT | ATGTTTCAAC | GTGTTTATTT  | TTCAATTGCA  |
|       | TTATTTCTTA | GCAAACACAA | TACAAAGTTG | CACAAATAAA  | AAGTTAACGT  |
| 32351 | GAAAATTTCA | AGTCATTTTT | CATTCAGTAG | TATAGCCCCA  | CCACCACATA  |
|       | CTTTTAAAGT | TCAGTAAAAA | GTAAGTCATC | ATATCGGGGT  | GGTGGTGTAT  |
| 32401 | GCTTATACAG | ATCACCGTAC | CTTAATCAAA | CTCACAGAAC  | CCTAGTATTC  |
|       | CGAATATGTC | TAGTGGCATG | GAATTAGTTT | GAGTGTCTTG  | GGATCATAAG  |
| 32451 | AACCTGCCAC | CTCCCTCCCA | ACACACAGAG | TACACAGTCC  | TTTCTCCCCG  |
|       | TTGGACGGTG | GAGGGAGGGT | TGTGTGTCTC | ATGTGTCAGG  | AAAGAGGGGC  |
| 32501 | GCTGGCCTTA | AAAAGCATCA | TATCATGGGT | AACAGACATA  | TTCTTAGGTG  |
|       | CGACCGGAAT | TTTTCGTAGT | ATAGTACCCA | TTGTCTGTAT  | AAGAATCCAC  |
| 32551 | TTATATTCCA | CACGGTTTCC | TGTCGAGCCA | AACGCTCATC  | AGTGATATTA  |
|       | AATATAAGGT | GTGCCAAAGG | ACAGCTCGGT | TTGCGAGTAG  | TCACTATAAT  |
| 32601 | ATAAACTCCC | CGGGCAGCTC | ACTTAAGTTC | ATGTCGCTGT  | CCAGCTGCTG  |
|       | TATTTGAGGG | GCCCGTCGAG | TGAATTCAAG | TACAGCGACA  | GGTCGACGAC  |
| 32651 | AGCCACAGGC | TGCTGTCCAA | CTTGCGGTTG | CTTAACGGGC  | GGCGAAGGAG  |
|       | TCGGTGTCCG | ACGACAGGTT | GAACGCCAAC | GAATTGCCCG  | CCGCTTCCTC  |
| 32701 | AAGTCCACGC | CTACATGGGG | GTAGAGTCAT | AATCGTGTCAT | CAGGATAGGG  |
|       | TTCAGGTGCG | GATGTACCCC | CATCTCAGTA | TTAGCACGTA  | GTCTATCCC   |
| 32751 | CGGTGGTGCT | GCAGCAGCGC | GCGAATAAAC | TGCTGCCGCC  | GCCGCTCCGT  |
|       | GCCACCACGA | CGTCGTCGCG | CGCTTATTTG | ACGACGGCGG  | CGGCGAGGCA  |

FIG. 16A-41

|       |            |             |            |            |             |
|-------|------------|-------------|------------|------------|-------------|
| 32801 | CCTGCAGGAA | TACAACATGG  | CAGTGGTCTC | CTCAGCGATG | ATTCGCACCG  |
|       | GGACGTCCTT | ATGTTGTACC  | GTCACCAGAG | GAGTCGCTAC | TAAGCGTGGC  |
| 32851 | CCCGCAGCAT | AAGGCGCCTT  | GTCCTCCGGG | CACAGCAGCG | CACCCTGATC  |
|       | GGGCGTCGTA | TTCCGCGGAA  | CAGGAGGCC  | GTGTCGTCGC | GTGGGACTAG  |
| 32901 | TCACTTAAAT | CAGCACAGTA  | ACTGCAGCAC | AGCACCACAA | TATTGTTCAA  |
|       | AGTGAATTTA | GTCGTGTCAT  | TGACGTCGTG | TCGTGGTGTT | ATAACAAGTT  |
| 32951 | AATCCACAG  | TGCAAGGCGC  | TGTATCCAAA | GCTCATGGCG | GGGACCACAG  |
|       | TTAGGGTGTC | ACGTTCCGCG  | ACATAGGTTT | CGAGTACCGC | CCCTGGTGTC  |
| 33001 | AACCCACGTG | GCCATCATAC  | CACAAGCGCA | GGTAGATTAA | GTGGCGACCC  |
|       | TTGGGTGCAC | CGGTAGTATG  | GTGTTGCGGT | CCATCTAATT | CACCGCTGGG  |
| 33051 | CTCATAAACA | CGCTGGACAT  | AAACATTACC | TCTTTTGGCA | TGTTGTAATT  |
|       | GAGTATTTGT | GCGACCTGTA  | TTTGTAATGG | AGAAAACCGT | ACAACATTAA  |
| 33101 | CACCACCTCC | CGGTACCATA  | TAAACCTCTG | ATTAAACATG | GCGCCATCCA  |
|       | GTGGTGAGG  | GCCATGGTAT  | ATTTGGAGAC | TAATTTGTAC | CGCGGTAGGT  |
| 33151 | CCACCATCCT | AAACCAGCTG  | GCCAAAACCT | GCCCGCCGGC | TATACACTGC  |
|       | GGTGGTAGGA | TTTGGTCGAC  | CGGTTTTGGA | CGGGCGGCCG | ATATGTGACG  |
| 33201 | AGGGAACCGG | GACTGGAACA  | ATGACAGTGG | AGAGCCCAGG | ACTCGTAACC  |
|       | TCCCTTGGCC | CTGACCTTGT  | TACTGTCACC | TCTCGGGTCC | TGAGCATTGG  |
| 33251 | ATGGATCATC | ATGCTCGTCA  | TGATATCAAT | GTTGGCACAA | CACAGGCA    |
|       | TACCTAGTAG | TACGAGCAGT  | ACTATAGTTA | CAACCGTGTT | GTGTCCGTGT  |
| 33301 | CGTGCATACA | CTTCCTCAGG  | ATTACAAGCT | CCTCCCGCGT | TAGAACCATA  |
|       | GCACGTATGT | GAAGGAGTCC  | TAATGTTCGA | GGAGGGCGCA | ATCTTGGTAT  |
| 33351 | TCCCAGGGAA | CAACCCATTC  | CTGAATCAGC | GTAAATCCCA | CACTGCAGGG  |
|       | AGGGTCCCTT | GTTGGGTAAG  | GACTTAGTCG | CATTTAGGGT | GTGACGTCCC  |
| 33401 | AAGACCTCGC | ACGTAACCTCA | CGTTGTGCAT | TGTCAAAGTG | TTACATTTCGG |
|       | TTCTGGAGCG | TGCATTGAGT  | GCAACACGTA | ACAGTTTCAC | AATGTAAGCC  |
| 33451 | GCAGCAGCGG | ATGATCCTCC  | AGTATGGTAG | CGCGGGTTTC | TGTCTCAAAA  |
|       | CGTCGTGCGC | TACTAGGAGG  | TCATACCATC | GCGCCCAAAG | ACAGAGTTTT  |
| 33501 | GGAGGTAGAC | GATCCCTACT  | GTACGGAGTG | CGCCGAGACA | ACCGAGATCG  |
|       | CCTCCATCTG | CTAGGGATGA  | CATGCCTCAC | GCGGCTCTGT | TGGCTCTAGC  |
| 33551 | TGTTGGTCGT | AGTGTCATGC  | CAAATGGAAC | GCCGGACGTA | GTCATATTTT  |
|       | ACAACCAGCA | TCACAGTACG  | GTTTACCTTG | CGGCCTGCAT | CAGTATAAAG  |

FIG. 16A-42

|       |            |             |             |            |            |
|-------|------------|-------------|-------------|------------|------------|
| 33601 | CTGAAGCAAA | ACCAGGTGCG  | GGCGTGACAA  | ACAGATCTGC | GTCTCCGGTC |
|       | GACTTCGTTT | TGGTCCACGC  | CCGCACTGTT  | TGTCTAGACG | CAGAGGCCAG |
| 33651 | TCGCCGCTTA | GATCGCTCTG  | TGTAGTAGTT  | GTAGTATATC | CACTCTCTCA |
|       | AGCGGCGAAT | CTAGCGAGAC  | ACATCATCAA  | CATCATATAG | GTGAGAGAGT |
| 33701 | AAGCATCCAG | GCGCCCCCTG  | GCTTCGGGTT  | CTATGTAAAC | TCCTTCATGC |
|       | TTCGTAGGTC | CGCGGGGGAC  | CGAAGCCCAA  | GATACATTTG | AGGAAGTACG |
| 33751 | GCCGCTGCCC | TGATAACATC  | CACCACCGCA  | GAATAAGCCA | CACCCAGCCA |
|       | CGGCGACGGG | ACTATTGTAG  | GTGGTGGCGT  | CTTATTCGGT | GTGGGTCCGT |
| 33801 | ACCTACACAT | TCGTTCTGCG  | AGTCACACAC  | GGGAGGAGCG | GGAAGAGCTG |
|       | TGGATGTGTA | AGCAAGACGC  | TCAGTGTGTG  | CCCTCCTCGC | CCTTCTCGAC |
| 33851 | GAAGAACCAT | GTTTTTTTTT  | TTATTCCAAA  | AGATTATCCA | AAACCTCAAA |
|       | CTTCTTGGTA | CAAAAAAAAA  | AATAAGGTTT  | TCTAATAGGT | TTTGGAGTTT |
| 33901 | ATGAAGATCT | ATTAAGTGAA  | CGCGCTCCCC  | TCCGGTGGCG | TGGTCAAAC  |
|       | TACTTCTAGA | TAATTCAC    | GCGCGAGGGG  | AGGCCACCGC | ACCAGTTTGA |
| 33951 | CTACAGCCAA | AGAACAGATA  | ATGGCATTG   | TAAGATGTTG | CACAATGGCT |
|       | GATGTCGGTT | TCTTGTCTAT  | TACCGTAAAC  | ATTCTACAAC | GTGTTACCGA |
| 34001 | TCCAAAAGGC | AAACGGCCCT  | CACGTCCAAG  | TGGACGTAAA | GGCTAAACCC |
|       | AGGTTTTCCG | TTTGCCGGGA  | GTGCAGGTTT  | ACCTGCATTT | CCGATTTGGG |
| 34051 | TTCAGGGTGA | ATCTCCTCTA  | TAAACATTCC  | AGCACCTTCA | ACCATGCCCA |
|       | AAGTCCCCT  | TAGAGGAGAT  | ATTTGTAAGG  | TCGTGGAAGT | TGGTACGGGT |
| 34101 | AATAATTCTC | ATCTCGCCAC  | CTTCTCAATA  | TATCTCTAAG | CAAATCCCGA |
|       | TTATTAAGAG | TAGAGCGGTG  | GAAGAGTTAT  | ATAGAGATTC | GTTTAGGGCT |
| 34151 | ATATTAAGTC | CGGCCATTGT  | AAAAATCTGC  | TCCAGAGCGC | CCTCCACCTT |
|       | TATAATTGAG | GCCGGTAACA  | TTTTTAGACG  | AGGTCTCGCG | GGAGGTGGAA |
| 34201 | CAGCCTCAAG | CAGCGAATCA  | TGATTGCAAA  | AATTCAGGTT | CCTCACAGAC |
|       | GTCGGAGTTC | GTCGCTTAGT  | ACTAACGTTT  | TTAAGTCCAA | GGAGTGTCTG |
| 34251 | CTGTATAAGA | TTCAAAAGCG  | GAACATTAAAC | AAAAATACCG | CGATCCCGTA |
|       | GACATATTCT | AAGTTTTTCGC | CTTGTAATTG  | TTTTTATGGC | GCTAGGGCAT |
| 34301 | GGTCCCTTCG | CAGGGCCAGC  | TGAACATAAT  | CGTGCAGGTC | TGCACGGACC |
|       | CCAGGGAAGC | GTCCCGGTTCG | ACTTGTAATTA | GCACGTCCAG | ACGTGCCTGG |
| 34351 | AGCGCGGCCA | CTTCCCCGCC  | AGGAACCATG  | ACAAAAGAAC | CCACACTGAT |
|       | TCGCGCCGGT | GAAGGGGCGG  | TCCTTGGTAC  | TGTTTTCTTG | GGTGTGACTA |

FIG. 16A-43

|       |                           |                           |                          |                           |                           |
|-------|---------------------------|---------------------------|--------------------------|---------------------------|---------------------------|
| 34401 | TATGACACGC<br>ATACTGTGCG  | ATACTCGGAG<br>TATGAGCCTC  | CTATGCTAAC<br>GATACGATTG | CAGCGTAGCC<br>GTCGCATCGG  | CCGATGTAAG<br>GGCTACATTC  |
| 34451 | CTTGTTGCAT<br>GAACAACGTA  | GGGCGGCGAT<br>CCCGCCGCTA  | ATAAAATGCA<br>TATTTTACGT | AGGTGCTGCT<br>TCCACGACGA  | CAAAAAATCA<br>GTTTTTTAGT  |
| 34501 | GGCAAAGCCT<br>CCGTTTCGGA  | CGCGCAAAAA<br>GCGCGTTTTT  | AGAAAGCACA<br>TCTTTCGTGT | TCGTAGTCAT<br>AGCATCAGTA  | GCTCATGCAG<br>CGAGTACGTC  |
| 34551 | ATAAAGGCAG<br>TATTTCCGTC  | GTAAGCTCCG<br>CATTCGAGGC  | GAACCACCAC<br>CTTGGTGGTG | AGAAAAAGAC<br>TCTTTTTCTG  | ACCATTTTTTC<br>TGGTAAAAAG |
| 34601 | TCTCAAACAT<br>AGAGTTTGTA  | GTCTGCGGGT<br>CAGACGCCCA  | TTCTGCATAA<br>AAGACGTATT | ACACAAAATA<br>TGTGTTTTAT  | AAATAACAAA<br>TTTATTGTTT  |
| 34651 | AAAACATTTA<br>TTTTGTAAAT  | AACATTAGAA<br>TTGTAATCTT  | GCCTGTCTTA<br>CGGACAGAAT | CAACAGGAAA<br>GTTGTCCTTT  | AACAACCCTT<br>TTGTTGGGAA  |
| 34701 | ATAAGCATAA<br>TATTCGTATT  | GACGGACTAC<br>CTGCCTGATG  | GGCCATGCCG<br>CCGGTACGGC | GCGTGACCGT<br>CGCACTGGCA  | AAAAAACTG<br>TTTTTTTTGAC  |
| 34751 | GTCACCGTGA<br>CAGTGGCACT  | TTAAAAAGCA<br>AATTTTTTCGT | CCACCGACAG<br>GGTGGCTGTC | CTCCTCGGTC<br>GAGGAGCCAG  | ATGTCCGGAG<br>TACAGGCCTC  |
| 34801 | TCATAATGTA<br>AGTATTACAT  | AGACTCGGTA<br>TCTGAGCCAT  | AACACATCAG<br>TTGTGTAGTC | GTTGATTACAC<br>CAACTAAGTG | ATCGGTCAGT<br>TAGCCAGTCA  |
| 34851 | GCTAAAAAGC<br>CGATTTTTTCG | GACCGAAATA<br>CTGGCTTTAT  | GCCCGGGGGA<br>CGGGCCCCCT | ATACATACCC<br>TATGTATGGG  | GCAGGCGTAG<br>CGTCCGCATC  |
| 34901 | AGACAACATT<br>TCTGTTGTAA  | ACAGCCCCCA<br>TGTCGGGGGT  | TAGGAGGTAT<br>ATCCTCCATA | AACAAAATTA<br>TTGTTTTAAT  | ATAGGAGAGA<br>TATCCTCTCT  |
| 34951 | AAAACACATA<br>TTTTGTGTAT  | AACACCTGAA<br>TTGTGGACTT  | AAACCCTCCT<br>TTTGGGAGGA | GCCTAGGCAA<br>CGGATCCGTT  | AATAGCACCC<br>TTATCGTGGG  |
| 35001 | TCCCGCTCCA<br>AGGGCGAGGT  | GAACAACATA<br>CTTGTTGTAT  | CAGCGCTTCC<br>GTCGCGAAGG | ACAGCGGCAG<br>TGTCGCCGTC  | CCATAACAGT<br>GGTATTGTCA  |
| 35051 | CAGCCTTACC<br>GTCGGAATGG  | AGTAAAAAAG<br>TCATTTTTTC  | AAAACCTATT<br>TTTTGGATAA | AAAAAAACAC<br>TTTTTTTGTG  | CACTCGACAC<br>GTGAGCTGTG  |
| 35101 | GGCACCAGCT<br>CCGTGGTCGA  | CAATCAGTCA<br>GTTAGTCAGT  | CAGTGTAATA<br>GTCACATTTT | AAGGGCCAAG<br>TTCCCGGTTC  | TGCAGAGCGA<br>ACGTCTCGCT  |
| 35151 | GTATATATAG<br>CATATATATC  | GACTAAAAAA<br>CTGATTTTTT  | TGACGTAACG<br>ACTGCATTGC | GTTAAAGTCC<br>CAATTCAGG   | ACAAAAAACA<br>TGTTTTTTGT  |

FIG. 16A-44

|       |            |            |            |            |            |
|-------|------------|------------|------------|------------|------------|
| 35201 | CCCAGAAAAC | CGCACGCGAA | CCTACGCCCA | GAAACGAAAG | CCAAAAAACC |
|       | GGGTCTTTTG | GCGTGCGCTT | GGATGCGGGT | CTTTGCTTTC | GGTTTTTTTG |
| 35251 | CACAACTTCC | TCAAATCGTC | ACTTCCGTTT | TCCCACGTTA | CGTCACTTCC |
|       | GTGTTGAAGG | AGTTTAGCAG | TGAAGGCAAA | AGGGTGCAAT | GCAGTGAAGG |
| 35301 | CATTTTAAGA | AAACTACAAT | TCCCAACACA | TACAAGTTAC | TCCGCCCTAA |
|       | GTAAAATTCT | TTTGATGTTA | AGGGTTGTGT | ATGTTCAATG | AGGCGGGATT |
| 35351 | AACCTACGTC | ACCCGCCCCG | TTCCCACGCC | CCGCGCCACG | TCACAAACTC |
|       | TTGGATGCAG | TGGGCGGGGC | AAGGGTGCGG | GGCGCGGTGC | AGTGTTTGAG |
| 35401 | CACCCCTCA  | TTATCATATT | GGCTTCAATC | CAAAATAAGG | TATATTATTG |
|       | GTGGGGGAGT | AATAGTATAA | CCGAAGTTAG | GTTTTATTCC | ATATAATAAC |
|       | PacI       |            |            |            |            |
|       | ~~~~~      |            |            |            |            |
| 35451 | ATGATGTTAA | TTAAGAATTC | GGATCTGCGA | CGCGAGGCTG | GATGGCCTTC |
|       | TACTACAATT | AATTCTTAAG | CCTAGACGCT | GCGCTCCGAC | CTACCGGAAG |
| 35501 | CCCATTATGA | TTCTTCTCGC | TTCCGGCGGC | ATCGGGATGC | CCGCGTTGCA |
|       | GGGTAATACT | AAGAAGAGCG | AAGGCCGCCG | TAGCCCTACG | GGCGCAACGT |
| 35551 | GGCCATGCTG | TCCAGGCAGG | TAGATGACGA | CCATCAGGGA | CAGCTTCAAG |
|       | CCGGTACGAC | AGGTCCGTCC | ATCTACTGCT | GGTAGTCCCT | GTCGAAGTTC |
| 35601 | GCCAGCAAAA | GGCCAGGAAC | CGTAAAAAGG | CCGCGTTGCT | GGCGTTTTTC |
|       | CGGTCGTTTT | CCGGTCCTTG | GCATTTTTTC | GGCGCAACGA | CCGCAAAAAG |
| 35651 | CATAGGCTCC | GCCCCCTGA  | CGAGCATCAC | AAAAATCGAC | GCTCAAGTCA |
|       | GTATCCGAGG | CGGGGGGACT | GCTCGTAGTG | TTTTTAGCTG | CGAGTTCAGT |
| 35701 | GAGGTGGCGA | AACCCGACAG | GACTATAAAG | ATACCAGGCG | TTTCCCCCTG |
|       | CTCCACCGCT | TTGGGCTGTC | CTGATATTTT | TATGGTCCGC | AAAGGGGGAC |
| 35751 | GAAGCTCCCT | CGTGCGCTCT | CCTGTTCCGA | CCCTGCCGCT | TACCGGATAC |
|       | CTTCGAGGGA | GCACGCGAGA | GGACAAGGCT | GGGACGGCGA | ATGGCCTATG |
| 35801 | CTGTCCGCCT | TTCTCCCTTC | GGGAAGCGTG | GCGCTTTCTC | ATAGCTCACG |
|       | GACAGGCGGA | AAGAGGGAAG | CCCTTCGCAC | CGCGAAAGAG | TATCGAGTGC |
| 35851 | CTGTAGGTAT | CTCAGTTCGG | TGTAGGTCGT | TCGCTCCAAG | CTGGGCTGTG |
|       | GACATCCATA | GAGTCAAGCC | ACATCCAGCA | AGCGAGGTTC | GACCCGACAC |
| 35901 | TGCACGAACC | CCCCGTTTCA | CCCGACCGCT | GCGCCTTATC | CGGTAACTAT |
|       | ACGTGCTTGG | GGGGCAAGTC | GGGCTGGCGA | CGCGGAATAG | GCCATTGATA |

FIG. 16A-45

|       |            |            |            |             |             |
|-------|------------|------------|------------|-------------|-------------|
| 35951 | CGTCTTGAGT | CCAACCCGGT | AAGACACGAC | TTATCGCCAC  | TGGCAGCAGC  |
|       | GCAGAACTCA | GGTTGGGCCA | TTCTGTGCTG | AATAGCGGTG  | ACCGTCGTCTG |
| 36001 | CACTGGTAAC | AGGATTAGCA | GAGCGAGGTA | TGTAGGCGGT  | GCTACAGAGT  |
|       | GTGACCATTG | TCCTAATCGT | CTCGCTCCAT | ACATCCGCCA  | CGATGTCTCA  |
| 36051 | TCTTGAAGTG | GTGGCCTAAC | TACGGCTACA | CTAGAAGGAC  | AGTATTTGGT  |
|       | AGAACTTCAC | CACCGGATTG | ATGCCGATGT | GATCTTCCTG  | TCATAAACCA  |
| 36101 | ATCTGCGCTC | TGCTGAAGCC | AGTTACCTTC | GGAAAAAGAG  | TTGGTAGCTC  |
|       | TAGACGCGAG | ACGACTTCGG | TCAATGGAAG | CCTTTTTTCTC | AACCATCGAG  |
| 36151 | TTGATCCGGC | AAACAAACCA | CCGCTGGTAG | CGGTGGTTTT  | TTTGTTTGCA  |
|       | AACTAGGCCG | TTTGTTTGGT | GGCGACCATC | GCCACCAAAA  | AAACAAACGT  |
| 36201 | AGCAGCAGAT | TACGCGCAGA | AAAAAAGGAT | CTCAAGAAGA  | TCCTTTGATC  |
|       | TCGTCTGCTA | ATGCGCGTCT | TTTTTTCCTA | GAGTTCTTCT  | AGGAAACTAG  |
| 36251 | TTTTCTACGG | GGTCTGACGC | TCAGTGGAAC | GAAAACTCAC  | GTTAAGGGAT  |
|       | AAAAGATGCC | CCAGACTGCG | AGTCACCTTG | CTTTTGAGTG  | CAATTCCCTA  |
| 36301 | TTTGGTCATG | AGATTATCAA | AAAGGATCTT | CACCTAGATC  | CTTTTAAATC  |
|       | AAACCAGTAC | TCTAATAGTT | TTTCCTAGAA | GTGGATCTAG  | GAAATTTAG   |
| 36351 | AATCTAAAGT | ATATATGAGT | AACTTGGTC  | TGACAGTTAC  | CAATGCTTAA  |
|       | TTAGATTTCA | TATATACTCA | TTTGAACCAG | ACTGTCAATG  | GTTACGAATT  |
| 36401 | TCAGTGAGGC | ACCTATCTCA | GCGATCTGTC | TATTTTCGTT  | ATCCATAGTT  |
|       | AGTCACTCCG | TGGATAGAGT | CGCTAGACAG | ATAAAGCAAG  | TAGGTATCAA  |
| 36451 | GCCTGACTCC | CCGTCGTGTA | GATAACTACG | ATACGGGAGG  | GCTTACCATC  |
|       | CGGACTGAGG | GGCAGCACAT | CTATTGATGC | TATGCCCTCC  | CGAATGGTAG  |
| 36501 | TGGCCCCAGT | GCTGCAATGA | TACCGCGAGA | CCCACGCTCA  | CCGGCTCCAG  |
|       | ACCGGGGTCA | CGACGTTACT | ATGGCGCTCT | GGGTGCGAGT  | GGCCGAGGTC  |
| 36551 | ATTTATCAGC | AATAAACCAG | CCAGCCGGAA | GGGCCGAGCG  | CAGAAGTGGT  |
|       | TAAATAGTCG | TTATTTGGTC | GGTCGGCCTT | CCCGGCTCGC  | GTCTTCACCA  |
| 36601 | CCTGCAACTT | TATCCGCCTC | CATCCAGTCT | ATTAATTGTT  | GCCGGGAAGC  |
|       | GGACGTTGAA | ATAGGCGGAG | GTAGGTCAGA | TAATTAACAA  | CGGCCCTTCG  |
| 36651 | TAGAGTAAGT | AGTTCGCCAG | TTAATAGTTT | GCGCAACGTT  | GTTGCCATTG  |
|       | ATCTCATTCA | TCAAGCGGTC | AATTATCAAA | CGCGTTGCAA  | CAACGGTAAC  |
| 36701 | CTACAGGCAT | CGTGGTGTCA | CGCTCGTCGT | TTGGTATGGC  | TTCATTCAGC  |
|       | GATGTCCGTA | GCACCACAGT | GCGAGCAGCA | AACCATACCG  | AAGTAAGTCG  |

FIG. 16A-46

|       |             |            |            |            |             |
|-------|-------------|------------|------------|------------|-------------|
| 36751 | TCCGGTTCCC  | AACGATCAAG | GCGAGTTACA | TGATCCCCCA | TGTTGTGCAA  |
|       | AGGCCAAGGG  | TTGCTAGTTC | CGCTCAATGT | ACTAGGGGGT | ACAACACGTT  |
| 36801 | AAAAGCGGTT  | AGCTCCTTCG | GTCCTCCGAT | CGTTGTCAGA | AGTAAGTTGG  |
|       | TTTTTCGCCAA | TCGAGGAAGC | CAGGAGGCTA | GCAACAGTCT | TCATTCAACC  |
| 36851 | CCGCAGTGTT  | ATCACTCATG | GTTATGGCAG | CACTGCATAA | TTCTCTTACT  |
|       | GGCGTCACAA  | TAGTGAGTAC | CAATACCGTC | GTGACGTATT | AAGAGAATGA  |
| 36901 | GTCATGCCAT  | CCGTAAGATG | CTTTTCTGTG | ACTGGTGAGT | ACTCAACCAA  |
|       | CAGTACGGTA  | GGCATTCTAC | GAAAAGACAC | TGACCACTCA | TGAGTTGGTT  |
| 36951 | GTCATTCTGA  | GAATAGTGTA | TGCGGCGACC | GAGTTGCTCT | TGCCCCGGCGT |
|       | CAGTAAGACT  | CTTATCACAT | ACGCCGCTGG | CTCAACGAGA | ACGGGCCGCA  |
| 37001 | CAACACGGGA  | TAATACCGCG | CCACATAGCA | GAACTTTAAA | AGTGCTCATC  |
|       | GTTGTGCCCT  | ATTATGGCGC | GGTGTATCGT | CTTGAAATTT | TCACGAGTAG  |
| 37051 | ATTGGAAAAC  | GTTCTTCGGG | GCGAAAACTC | TCAAGGATCT | TACCGCTGTT  |
|       | TAACCTTTTTG | CAAGAAGCCC | CGCTTTTGAG | AGTTCCTAGA | ATGGCGACAA  |
| 37101 | GAGATCCAGT  | TCGATGTAAC | CCACTCGTGC | ACCCAACTGA | TCTTCAGCAT  |
|       | CTCTAGGTCA  | AGCTACATTG | GGTGAGCACG | TGGGTTGACT | AGAAGTCGTA  |
| 37151 | CTTTTACTTT  | CACCAGCGTT | TCTGGGTGAG | CAAAAACAGG | AAGGCAAAAT  |
|       | GAAAATGAAA  | GTGGTCGCAA | AGACCCACTC | GTTTTTGTCC | TTCCGTTTTA  |
| 37201 | GCCGCAAAAA  | AGGGAATAAG | GGCGACACGG | AAATGTTGAA | TACTCATACT  |
|       | CGGCGTTTTT  | TCCCTTATTC | CCGCTGTGCC | TTTACAACCT | ATGAGTATGA  |
| 37251 | CTTCCTTTTT  | CAATATTATT | GAAGCATTTA | TCAGGGTTAT | TGTCTCATGA  |
|       | GAAGGAAAAA  | GTTATAATAA | CTTCGTAAAT | AGTCCCAATA | ACAGAGTACT  |
| 37301 | GCGGATACAT  | ATTTGAATGT | ATTTAGAAAA | ATAAACAAAT | AGGGGTTCGG  |
|       | CGCCTATGTA  | TAAACTTACA | TAAATCTTTT | TATTTGTTTA | TCCCCAAGGC  |
| 37351 | CGCACATTTT  | CCCGAAAAGT | GCCACCTGAC | GTCTAAGAAA | CCATTATTAT  |
|       | GCGTGTAAG   | GGGCTTTTCA | CGGTGGACTG | CAGATTCTTT | GGTAATAATA  |
| 37401 | CATGACATTA  | ACCTATAAAA | ATAGGCGTAT | CACGAGGCCC | TTTCGTCTTC  |
|       | GTAAGTAAAT  | TGGATATTTT | TATCCGCATA | GTGCTCCGGG | AAAGCAGAAG  |
| 37451 | AAGAATTGGA  | TCCGAATTCT | TAAT       |            |             |
|       | TTCTTAACCT  | AGGCTTAAGA | ATTA       |            |             |

FIG. 16A-47



|      |             |            |            |            |             |             |
|------|-------------|------------|------------|------------|-------------|-------------|
| 1    | CATCATCAAT  | AATATACCTT | ATTTTGGATT | GAAGCCAATA | TGATAATGAG  | GGGGTGGAGT  |
| 61   | TTGTGACGTG  | GCGCGGGGCG | TGGGAACGGG | GCGGGTGACG | TAGTAGTGTG  | GCGGAAGTGT  |
| 121  | GATGTTGTAA  | GTGTGGCGGA | ACACATGTAA | GCGCCGGATG | TGGTAAAAGT  | GACGTTTTTG  |
| 181  | GTGTGCGCCG  | GTGTACACGG | GAAGTGACAA | TTTTCGCGCG | GTTTTAGGCG  | GATGTTGTAG  |
| 241  | TAAATTTGGG  | CGTAACCAAG | TAATATTTGG | CCATTTTCGC | GGGAAAAC TG | AATAAGAGGA  |
| 301  | AGTGAAATCT  | GAATAATTCT | GTGTTACTCA | TAGCGCGTAA | TATTTGTCTA  | GGGCCGCGGG  |
| 361  | GACTTTGACC  | GTTTACGTGG | AGACTCGCCC | AGGTGTTTTT | CTCAGGTGTT  | TTCCGCGTTC  |
| 421  | CGGGTCAAAAG | TTGGCGTTTT | ATTATTATAG | TCAGCTGACG | CGCAGTGTAT  | TTATACCCGG  |
| 481  | TGAGTTCCTC  | AAGAGGCCAC | TCTTGAGTGC | CAGCGAGTAG | AGTTTTCTCC  | TCCGAGCCGC  |
| 541  | TCCGACACCG  | GGACTGAAAA | TGAGACATAT | TATCTGCCAC | GGAGGTGTTA  | TTACCGAAGA  |
| 601  | AATGGCCGCC  | AGTCTTTTGG | ACCAGCTGAT | CGAAGAGGTA | CTGGCTGATA  | ATCTTCCACC  |
| 661  | TCCTAGCCAT  | TTTGAACCAC | CTACCCTTCA | CGAACTGTAT | GATTTAGACG  | TGACGGCCCC  |
| 721  | CGAAGATCCC  | AACGAGGAGG | CGGTTTCGCA | GATTTTTCCC | GAGTCTGTAA  | TGTTGGCGGT  |
| 781  | GCAGGAAGGG  | ATTGACTTAT | TCACTTTTCC | GCCGGCGCCC | GGTCTCCCGG  | AGCCGCCTCA  |
| 841  | CCTTTCCCGG  | CAGCCCGAGC | AGCCGGAGCA | GAGAGCCTTG | GGTCCGGTTT  | CTATGCCAAA  |
| 901  | CCTTG TGCCG | GAGGTGATCG | ATCTTACCTG | CCACGAGGCT | GGCTTTCCAC  | CCAGTGACGA  |
| 961  | CGAGGATGAA  | GAGGGTGAGG | AGTTTGTGTT | AGATTATGTG | GAGCACCCCG  | GGCACGGTTG  |
| 1021 | CAGGTCTTGT  | CATTATCACC | GGAGGAATAC | GGGGGACCCA | GATATTATGT  | GTTTCGCTTG  |
| 1081 | CTATATGAGG  | ACCTGTGGCA | TGTTTGTCTA | CAGTAAGTGA | AAAATTATGG  | GCAGTGGGTG  |
| 1141 | ATAGAGTGGT  | GGGTTTGGTG | TGGTAATTTT | TTTTTTAATT | TTTACAGTTT  | TGTGGTTTAA  |
| 1201 | AGAATTTTGT  | ATTGTGATTT | TTTAAAAGGT | CCTGTGTCTG | AACCTGAGCC  | TGAGCCCGAG  |
| 1261 | CCAGAACCGG  | AGCCTGCAAG | ACCTACCCGG | CGTCCTAAAT | TGGTGCCTGC  | TATCCTGAGA  |
| 1321 | CGCCCGACAT  | CACCTGTGTC | TAGAGAATGC | AATAGTAGTA | CGGATAGCTG  | TGACTCCGGT  |
| 1381 | CCTTCTAACA  | CACCTCCTGA | GATACACCCG | GTGGTCCCGC | TGTGCCCCAT  | TAAACCAAGT  |
| 1441 | GCCGTGAGAG  | TTGGTGGGCG | TCGCCAGGCT | GTGGAATGTA | TCGAGGACTT  | GCTTAACGAG  |
| 1501 | TCTGGGCAAC  | CTTTGGACTT | GAGCTGTAAA | CGCCCCAGGC | CATAAGGTGT  | AAACCTGTGA  |
| 1561 | TTGCGTGTGT  | GGTTAACGCC | TTTGTTTGCT | GAATGAGTTG | ATGTAAGTTT  | AATAAAGGGT  |
| 1621 | GAGATAATGT  | TTAACTTGCA | TGGCGTGTTA | AATGGGGCGG | GGCTTAAAGG  | GTATATAATG  |
| 1681 | CGCCGTGGGC  | TAATCTTGGT | TACATCTGAC | CTCATGGAGG | CTTGGGAGTG  | TTTGGAAGAT  |
| 1741 | TTTTCTGCTG  | TGCGTAACTT | GCTGGAACAG | AGCTCTAACA | GTACCTCTTG  | GTTTTGGAGG  |
| 1801 | TTTCTGTGGG  | GCTCCTCCCA | GGCAAAGTTA | GTCTGCAGAA | TTAAGGAGGA  | TTACAAGTGG  |
| 1861 | GAATTTGAAG  | AGCTTTTGAA | ATCCTGTGGT | GAGCTGTTTG | ATTCTTTGAA  | TCTGGGTCAC  |
| 1921 | CAGGCGCTTT  | TCCAAGAGAA | GGTCATCAAG | ACTTTGGATT | TTTCCACACC  | GGGGCGCGCT  |
| 1981 | GCGGCTGCTG  | TTGCTTTTTT | GAGTTTTATA | AAGGATAAAT | GGAGCGAAGA  | AACCCATCTG  |
| 2041 | AGCGGGGGGT  | ACCTGCTGGA | TTTTCTGGCC | ATGCATCTGT | GGAGAGCGGT  | GGTGAGACAC  |
| 2101 | AAGAATCGCC  | TGCTACTGTT | GTCTTCCGTC | CGCCCGGCAA | TAATACCGAC  | GGAGGAGCAA  |
| 2161 | CAGCAGGAGG  | AAGCCAGGCG | GCGGCGGCGG | CAGGAGCAGA | GCCCATGGAA  | CCCGAGAGCC  |
| 2221 | GGCCTGGACC  | CTCGGGAATG | AATGTTGTAC | AGGTGGCTGA | ACTGTTTCCA  | GAAGTGAGAC  |
| 2281 | GCATTTTAAC  | CATTAACGAG | GATGGGCAGG | GGCTAAAGGG | GGTAAAGAAG  | GAGCGGGGGG  |
| 2341 | CTTCTGAGGC  | TACAGAGGAG | GCTAGGAATC | TAACTTTTAG | CTTAATGACC  | AGACACCGTC  |
| 2401 | CTGAGTGTGT  | TACTTTTCAG | CAGATTAAGG | ATAATTGCGC | TAATGAGCTT  | GATCTGCTGG  |
| 2461 | CGCAGAAGTA  | TTCCATAGAG | CAGCTGACCA | CTTACTGGCT | GCAGCCAGGG  | GATGATTTTTG |
| 2521 | AGGAGGCTAT  | TAGGGTATAT | GCAAAGGTGG | CACTTAGGCC | AGATTGCAAG  | TACAAGATTA  |

FIG. 17A-1

|      |             |             |             |             |            |            |
|------|-------------|-------------|-------------|-------------|------------|------------|
| 2581 | GCAAACCTTGT | AAATATCAGG  | AATTGTTGCT  | ACATTTCTGG  | GAACGGGGCC | GAGGTGGAGA |
| 2641 | TAGATACGGA  | GGATAGGGTG  | GCCTTTAGAT  | GTAGCATGAT  | AAATATGTGG | CCGGGGGTGC |
| 2701 | TTGGCATGGA  | CGGGGTGGTT  | ATTATGAATG  | TGAGGTTTAC  | TGGTCCCAAT | TTTAGCGGTA |
| 2761 | CGGTTTTCTT  | GGCCAATACC  | AATCTTATCC  | TACACGGTGT  | AAGCTTCTAT | GGGTTTAACA |
| 2821 | ATACCTGTGT  | GGAAGCCTGG  | ACCGATGTAA  | GGGTTCGGGG  | CTGTGCCTTT | TACTGCTGCT |
| 2881 | GGAAGGGGGT  | GGTGTGTCGC  | CCCAAAAGCA  | GGGCTTCAAT  | TAAGAAATGC | CTGTTTGAAA |
| 2941 | GGTGTACCTT  | GGGTATCCTG  | TCTGAGGGTA  | ACTCCAGGGT  | GCGCCACAAT | GTGGCCTCCG |
| 3001 | ACTGTGGTTG  | CTTTATGCTA  | GTGAAAAGCG  | TGGCTGTGAT  | TAAGCATAAC | ATGGTGTGTG |
| 3061 | GCAACTGCGA  | GGACAGGGCC  | TCTCAGATGC  | TGACCTGCTC  | GGACGGCAAC | TGTCACCTGC |
| 3121 | TGAAGACCAT  | TCACGTAGCC  | AGCCACTCTC  | GCAAGGCCTG  | GCCAGTGTTT | GAGCACAACA |
| 3181 | TACTGACCCG  | CTGTTCCCTG  | CATTTGGGTA  | ACAGGAGGGG  | GGTGTTCCTA | CCTTACCAAT |
| 3241 | GCAATTTGAG  | TCACACTAAG  | ATATTGCTTG  | AGCCCAGAGAG | CATGTCCAAG | GTGAACCTGA |
| 3301 | ACGGGGTGTT  | TGACATGACC  | ATGAAGATCT  | GGAAGGTGCT  | GAGGTACGAT | GAGACCCGCA |
| 3361 | CCAGGTGCAG  | ACCTTGCGAG  | TGTGGCGGTA  | AACATATTAG  | GAACCAGCCT | GTGATGCTGG |
| 3421 | ATGTGACCGA  | GGAGCTGAGG  | CCCGATCACT  | TGGTGCTGGC  | CTGCACCCGC | GCTGAGTTTG |
| 3481 | GCTCTAGCGA  | TGAAGATACA  | GATTGAGGTA  | CTGAAATGTG  | TGGGCGTGGC | TTAAGGGTGG |
| 3541 | GAAAGAATAT  | ATAAGGTGGG  | GGTCTCATGT  | AGTTTTGTAT  | CTGTTTTGCA | GCAGCCGCCG |
| 3601 | CCATGAGCGC  | CAACTCGTTT  | GATGGAAGCA  | TTGTGAGCTC  | ATATTTGACA | ACGCGCATGC |
| 3661 | CCCCATGGGC  | CGGGGTGCGT  | CAGAAATGTGA | TGGGCTCCAG  | CATTGATGGT | CGCCCCGTCC |
| 3721 | TGCCCCGAAA  | CTCTACTACC  | TTGACCTACG  | AGACCGTGTC  | TGGAACGCCG | TTGGAGACTG |
| 3781 | CAGCCTCCGC  | CGCCGCTTCA  | GCCGCTGCAG  | CCACCGCCCC  | CGGGATTGTG | ACTGACTTTG |
| 3841 | CTTTCCTGAG  | CCCGCTTGCA  | AGCAGTGCAG  | CTTCCCGTTC  | ATCCGCCCGC | GATGACAAGT |
| 3901 | TGACGGCTCT  | TTTGGCACAA  | TTGGATTCTT  | TGACCCGGGA  | ACTTAATGTC | GTTTCTCAGC |
| 3961 | AGCTGTTGGA  | TCTGCGCCAG  | CAGGTTTCTG  | CCCTGAAGGC  | TTCTTCCCCT | CCCAATGCGG |
| 4021 | TTTAAACAT   | AAATAAAAAC  | CAGACTCTGT  | TTGGATTTGG  | ATCAAGCAAG | TGTCTTGCTG |
| 4081 | TCTTTATTTA  | GGGGTTTTGC  | GCGCGCGGTA  | GGCCCCGGAC  | CAGCGGTCTC | GGTCGTTGAG |
| 4141 | GGTCCTGTGT  | ATTTTTTTCCA | GGACGTGGTA  | AAGGTGACTC  | TGGATGTTCA | GATACATGGG |
| 4201 | CATAAGCCCG  | TCTCTGGGGT  | GGAGGTAGCA  | CCACTGCAGA  | GCTTCATGCT | GCGGGGTGGT |
| 4261 | GTTGTAGATG  | ATCCAGTCGT  | AGCAGGAGCG  | CTGGGCGTGG  | TGCCTAAAAA | TGTCTTTCAG |
| 4321 | TAGCAAGCTG  | ATTGCCAGGG  | GCAGGCCCTT  | GGTGTAAGTG  | TTTACAAAGC | GGTTAAGCTG |
| 4381 | GGATGGGTGC  | ATACGTGGGG  | ATATGAGATG  | CATCTTGGAC  | TGTATTTTTA | GGTTGGCTAT |
| 4441 | GTTCCAGCC   | ATATCCCTCC  | GGGGATTTCAT | GTTGTGCAGA  | ACCACCAGCA | CAGTGTATCC |
| 4501 | GGTGCACTTG  | GGAAATTTGT  | CATGTAGCTT  | AGAAGGAAAT  | GCGTGGAAGA | ACTTGAGAGC |
| 4561 | GCCCTTGTGA  | CCTCCAAGAT  | TTTCCATGCA  | TTCGTCCATA  | ATGATGGCAA | TGGGCCCACG |
| 4621 | GGCGGCGGCC  | TGGGCGAAGA  | TATTTCTGGG  | ATCACTAACG  | TCATAGTTGT | GTTCCAGGAT |
| 4681 | GAGATCGTCA  | TAGGCCATTT  | TTACAAAGCG  | CGGGCGGAGG  | GTGCCAGACT | GCGGTATAAT |
| 4741 | GGTTCCATCC  | GGCCCAGGGG  | CGTAGTTACC  | CTCACAGATT  | TGCATTTCCC | ACGCTTTGAG |
| 4801 | TTCAGATGGG  | GGGATCATGT  | CTACCTGCGG  | GGCGATGAAG  | AAAACCGTTT | CCGGGGTAGG |
| 4861 | GGAGATCAGC  | TGGGAAGAAA  | GCAGGTTTCT  | AAGCAGCTGC  | GACTTACCGC | AGCCGGTGGG |
| 4921 | CCCGTAAATC  | ACACCTATTA  | CCGGCTGCAA  | CTGGTAGTTA  | AGAGAGCTGC | AGCTGCCGTC |
| 4981 | ATCCCTGAGC  | AGGGGGGCCA  | CTTCGTTAAG  | CATGTCCCTG  | ACTTGATGCT | TTTCCCTGAC |
| 5041 | CAAATCCGCC  | AGAAGGCGCT  | CGCCGCCAG   | CGATAGCAGT  | TCTTGCAAGG | AAGCAAAGTT |
| 5101 | TTTCAACGGT  | TTGAGGCCGT  | CCGCCGTAGG  | CATGCTTTTG  | AGCGTTTGAC | CAAGCAGTTC |

FIG. 17A-2

|      |             |            |            |            |             |             |
|------|-------------|------------|------------|------------|-------------|-------------|
| 5161 | CAGGCGGTCC  | CACAGCTCGG | TCACGTGCTC | TACGGCATCT | CGATCCAGCA  | TATCTCCTCG  |
| 5221 | TTTCGCGGGT  | TGGGGCGGCT | TTCGCTGTAC | GGCAGTAGTC | GGTGCTCGTC  | CAGACGGGGC  |
| 5281 | AGGGTCATGT  | CTTTCACGG  | GCGCAGGGTC | CTCGTCAGCG | TAGTCTGGGT  | CACGGTGAAG  |
| 5341 | GGGTGCGCTC  | CGGGTTGCGC | GCTGGCCAGG | GTGCGCTTGA | GGCTGGTCCT  | GCTGGTGCTG  |
| 5401 | AAGCGCTGCC  | GGTCTTCGCC | CTGCGCGTCG | GCCAGGTAGC | ATTTGACCAT  | GGTGTTCATAG |
| 5461 | TCCAGCCCCCT | CCGCGGCGTG | GCCCTTGCGC | CGCAGCTTGC | CCTTGGAGGA  | GGCGCCGCAC  |
| 5521 | GAGGGGCAGT  | GCAGACTTTT | AAGGGCGTAG | AGCTTGGGCG | CGAGAAATAC  | CGATTCCGGG  |
| 5581 | GAGTAGGCAT  | CCGCGCCGCA | GGCCCCGCAG | ACGGTCTCGC | ATTCCACGAG  | CCAGGTGAGC  |
| 5641 | TCTGGCCGTT  | CGGGGTCAAA | AACCAGGTTT | CCCCCATGCT | TTTTGATGCG  | TTTCTTACCT  |
| 5701 | CTGGTTTCCA  | TGAGCCGGTG | TCCACGCTCG | GTGACGAAAA | GGCTGTCCGT  | GTCCCCGTAT  |
| 5761 | ACAGACTTGA  | GAGGCCGTGC | CTCGAGCGGT | GTTCCGCGGT | CCTCCTCGTA  | TAGAAACTCG  |
| 5821 | GACCACTCTG  | AGACGAAGGC | TCGCGTCCAG | GCCAGCACGA | AGGAGGCTAA  | GTGGGAGGGG  |
| 5881 | TAGCGGTCGT  | TGTCCACTAG | GGGGTCCACT | CGCTCCAGGG | TGTGAAGACA  | CATGTCGCCC  |
| 5941 | TCTTCGGCAT  | CAAGGAAGGT | GATTGGTTTA | TAGGTGTAGG | CCACGTGACC  | GGGTGTTTCT  |
| 6001 | GAAGGGGGGC  | TATAAAAGGG | GGTGGGGGCG | CGTTTCGTCT | CACTCTCTTC  | CGCATCGCTG  |
| 6061 | TCTGCGAGGG  | CCAGCTGTTG | GGGTGAGTAC | TCCCTCTCAA | AAGCGGGCAT  | GACTTCTGCG  |
| 6121 | CTAAGATTGT  | CAGTTTCCAA | AAACGAGGAG | GATTTGATAT | TCACCTGGCC  | CGCGGTGATG  |
| 6181 | CCTTTGAGGG  | TGGCCGCGTC | CATCTGGTCA | GAAAAGACAA | TCTTTTGTG   | GTCAAGCTTG  |
| 6241 | GTGGCAAACG  | ACCCGTAGAG | GGCGTTGGAC | AGCAACTTGG | CGATGGAGCG  | CAGGGTTTGG  |
| 6301 | TTTTTGTTCG  | GATCGGCGCG | CTCCTTGCGC | GCGATGTTTA | GCTGCACGTA  | TTCGCGCGCA  |
| 6361 | ACGCACCGCC  | ATTCGGGAAA | GACGGTGGTG | CGCTCGTCGG | GCACTAGGTG  | CACGCGCCAA  |
| 6421 | CCGCGGTTGT  | GCAGGGTGAC | AAGGTCAACG | CTGGTGGCTA | CCTCTCCGCG  | TAGGCGCTCG  |
| 6481 | TTGGTCCAGC  | AGAGGCGGCC | GCCCTTGCGC | GAGCAGAATG | GCGGTAGTGG  | GTCTAGCTGC  |
| 6541 | GTCTCGTCCG  | GGGGGTCTGC | GTCCACGGTA | AAGACCCCGG | GCAGCAGGCG  | CGCGTCGAAG  |
| 6601 | TAGTCTATCT  | TGCATCCTTG | CAAGTCTAGC | GCCTGTGCGC | ATGCGCGGGC  | GGCAAGCGCG  |
| 6661 | CGCTCGTATG  | GGTTGAGTGG | GGGACCCCAT | GGCATGGGGT | GGGTGAGCGC  | GGAGGCGTAC  |
| 6721 | ATGCCGCAAA  | TGTCGTAAAC | GTAGAGGGGC | TCTCTGAGTA | TTCCAAGATA  | TGTAGGGTAG  |
| 6781 | CATCTTCCAC  | CGCGGATGCT | GGCGGCGACG | TAATCGTATA | GTTTCGTGCGA | GGGAGCGAGG  |
| 6841 | AGGTCGGGAC  | CGAGGTTGCT | ACGGGCGGGC | TGCTCTGCTC | GGAAGACTAT  | CTGCCTGAAG  |
| 6901 | ATGGCATGTG  | AGTTGGATGA | TATGGTTGGA | CGCTGGAAGA | CGTTGAAGCT  | GGCGTCTGTG  |
| 6961 | AGACCTACCG  | CGTCACGCAC | GAAGGAGGCG | TAGGAGTCGC | GCAGCTTGTT  | GACCAGCTCG  |
| 7021 | GCGGTGACCT  | GCACGTCTAG | GGCGCAGTAG | TCCAGGGTTT | CCTTGATGAT  | GTCATACTTA  |
| 7081 | TCCTGTCCCT  | TTTTTTTCCA | CAGCTCGCGG | TTGAGGACAA | ACTCTTCGCG  | GTCTTTCCAG  |
| 7141 | TACTCTTGGA  | TCGGAAACCC | GTCGGCCTCC | GAACGGTAAG | AGCCTAGCAT  | GTAGAACTGG  |
| 7201 | TTGACGGCCT  | GGTAGGCGCA | GCATCCCTTT | TCTACGGGTA | GCGCGTATGC  | CTGCGCGGCC  |
| 7261 | TTCCGGAGCG  | AGGTGTGGGT | GAGCGCAAAG | GTGTCCCTAA | CCATGACTTT  | GAGGTACTGG  |
| 7321 | TATTTGAAGT  | CAGTGTGCTC | GCATCCGCCC | TGCTCCCAGA | GCAAAAAGTC  | CGTGCGCTTT  |
| 7381 | TTGGAACGCG  | GGTTTGGCAG | GGCGAAGGTG | ACATCGTTGA | AGAGTATCTT  | TCCCGCGCGA  |
| 7441 | GGCATAAAGT  | TGCGTGTGAT | GCGGAAGGGT | CCCGGCACCT | CGGAACGGTT  | GTTAATTACC  |
| 7501 | TGGGCGGCGA  | GCACGATCTC | GTCAAAGCCG | TTGATGTTGT | GGCCCACAAT  | GTAAAGTTCC  |
| 7561 | AAGAAGCGCG  | GGATGCCCTT | GATGGAAGGC | AATTTTTTAA | GTTCCTCGTA  | GGTGAGCTCT  |
| 7621 | TCAGGGGAGC  | TGAGCCCGTG | CTCTGAAAGG | GCCCAGTCTG | CAAGATGAGG  | GTTGGAAGCG  |
| 7681 | ACGAATGAGC  | TCCACAGGTC | ACGGGCCATT | AGCATTTGCA | GGTGGTTCGCG | AAAGGTCCTA  |

FIG. 17A-3

7741 AACTGGCGAC CTATGGCCAT TTTTCTGGG GTGATGCAGT AGAAGGTAAG CGGGTCTTGT  
7801 TCCCAGCGGT CCCATCCAAG GTCCGCGGCT AGGTCTCGCG CGGCGGTCAC TAGAGGCTCA  
7861 TCTCCGCCGA ACTTCATGAC CAGCATGAAG GGCACGAGCT GCTTCCCAAA GGCCCCCATC  
7921 CAAGTATAGG TCTCTACATC GTAGGTGACA AAGAGACGCT CGGTGCGAGG ATGCGAGCCG  
7981 ATCGGGAAGA ACTGGATCTC CCGCCACCAG TTGGAGGAGT GGCTGTTGAT GTGGTGAAAG  
8041 TAGAAGTCCC TGCACGGGC CGAACACTCG TGCTGGCTTT TGTA AAAACG TGCGCAGTAC  
8101 TGGCAGCGGT GCACGGGCTG TACATCCTGC ACGAGGTTGA CCTGACGACC GCGCACAAGG  
8161 AAGCAGAGTG GGAATTTGAG CCCCTCGCCT GGCGGGTTTG GCTGGTGGTC TTCTACTTCG  
8221 GCTGCTTGTC CTTGACCGTC TGGCTGCTCG AGGGGAGTTA CGGTGGATCG GACCACCACG  
8281 CCGCGCGAGC CCAAAGTCCA GATGTCCGCG CGCGGCGGTC GGAGCTTGAT GACAACATCG  
8341 CGCAGATGGG AGCTGTCCAT GGTCTGGAGC TCCCGCGGCG TCAGGTCAGG CGGGAGCTCC  
8401 TGCAGGTTTA CCTCGCATAG CCGGGTCAGG GCGCGGGCTA GGTCCAGGTG ATACCTGATT  
8461 TCCAGGGGCT GGTGTTGGC GGCCTCGATG GCTTGCAAGA GGCCGCATCC CCGCGGCGCG  
8521 ACTACGGTAC CGCGCGGCGG GCGGTGGGCC GCGGGGGTGT CCTTGATGA TGCATCTAAA  
8581 AGCGGTGACG CGGGCGGGCC CCCGGAGGTA GGGGGGGCTC GGGACCCGCC GGGAGAGGGG  
8641 GCAGGGGCAC GTCGGCGCCG CGCGCGGGCA GGAGCTGGTG CTGCGCGCGG AGGTTGCTGG  
8701 CGAACGCGAC GACGCGGCGG TTGATCTCCT GAATCTGGCG CCTCTGCGTG AAGACGACGG  
8761 GCGCGGTGAG CTTGAACCTG AAAGAGAGTT CGACAGAATC AATTTCGGTG TCGTTGACGG  
8821 CGGCCTGGCG CAAAATCTCC TGCACGTCTC CTGAGTTGTC TTGATAGGCG ATCTCGGCCA  
8881 TGAAGTCTC GATCTCTTCC TCCTGGAGAT CTCCGCGTCC GGCTCGCTCC ACGGTGGCGG  
8941 CGAGGTGCTT GGAGATGCGG GCCATGAGCT GCGAGAAGGC GTTGAGGCCT CCCTCGTTCC  
9001 AGACGCGGCT GTAGACCACG CCCCTTTCGG CATCGCGGGC GCGCATGACC ACCTGCGCGA  
9061 GATTGAGCTC CACGTGCCGG GCGAAGACGG CGTAGTTTCG CAGGCGCTGA AAGAGGTAGT  
9121 TGAGGGTGGT GGCGGTGTGT TCTGCCACGA AGAAGTACAT AACCAGCGC CGCAACGTGG  
9181 ATTCGTTGAT ATCCCCAAG GCCTCAAGGC GCTCCATGGC CTCGTAGAAG TCCACGGCGA  
9241 AGTTGAAAAA CTGGGAGTTG CGCGCCGACA CGGTAACTC CTCCTCCAGA AGACGGATGA  
9301 GCTCGGCGAC AGTGTGCGC ACCTCGCGCT CAAAGGCTAC AGGGGCCTCT TCTTCTTCTT  
9361 CAATCTCCTC TTCCATAAGG GCCTCCCTT CTTCTTCTT TGGCGGCGGT GGGGGAGGGG  
9421 GGACACGGCG GCGACGACGG CGCACCGGGA GGCGGTGCGC AAAGCGCTCG ATCATCTCCC  
9481 CGCGGCGACG GCGCATGGTC TCGGTGACGG CGCGGCCGTT CTCGCGGGGG GCGAGTTGGA  
9541 AGACGCCGCC CGTCATGTCC CGGTTATGGG TTGGCGGGGG GCTGCCGTGC GGCAGGGATA  
9601 CGGCGCTAAC GATGCATCTC AACAATTGTT GTGTAGGTAC TCCGCCACCG AGGGACCTGA  
9661 GCGAGTCCGC ATCGACCGGA TCGGAAAACC TCTCGAGAAA GGCGTCTAAC CAGTCACAGT  
9721 CGCAAGGTAG GCTGAGCACC GTGGCGGGCG GCAGCGGGCG GCGGTGCGGG TTGTTTCTGG  
9781 CGGAGGTGCT GCTGATGATG TAATTAAAGT AGGCGGTCTT GAGACGGCGG ATGGTCGACA  
9841 GAAGCACCAT GTCCTTGGGT CCGGCCTGCT GAATGCGCAG GCGGTGCGCC ATGCCCCAGG  
9901 CTTCTTTT ACATCGGCGC AGGTCTTTGT AGTAGTCTTG CATGAGCCTT TCTACGGCA  
9961 CTTCTTCTT TCCTTCTCT TGTCTGTCAT CTCTTGCATC TATCGCTGCG GCGGCGGCGG  
10021 AGTTTGGCCG TAGGTGGCGC CCTCTTCTC CCATGCGTGT GACCCCGAAG CCCCTCATCG  
10081 GCTGAAGCAG GGCCAGGTCG GCGACAACGC GCTCGGCTAA TATGGCCTGC TGCACCTGCG  
10141 TGAGGGTAGA CTGGAAGTCG TCCATGTCCA CAAAGCGGTG GTATGCGCCC GTGTTGATGG  
10201 TGTAAGTGCA GTTGGCCATA ACGGACCAGT TAACGGTCTG GTGACCGGCG TGCGAGAGCT  
10261 CGGTGTACCT GAGACGCGAG TAAGCCCTTG AGTCAAAGAC GTAGTCGTTG CAAGTCCGCA

FIG. 17A-4

|       |             |             |            |             |            |            |
|-------|-------------|-------------|------------|-------------|------------|------------|
| 10321 | CCAGGTACTG  | GTATCCCACC  | AAAAAGTGCG | GCGGCGGCTG  | GCGGTAGAGG | GGCCAGCGTA |
| 10381 | GGGTGGCCGG  | GGCTCCGGGG  | GCGAGGTCTT | CCAACATAAG  | GCGATGATAT | CCGTAGATGT |
| 10441 | ACCTGGACAT  | CCAGGTGATG  | CCGGCGGCGG | TGGTGGAGGC  | GCGCGGAAAG | TCACGGACGC |
| 10501 | GGTTCCAGAT  | GTTGCGCAGC  | GGCAAAAAGT | GCTCCATGGT  | CGGGACGCTC | TGGCCGGTCA |
| 10561 | GGCGCGCGCA  | GTCGTTGACG  | CTCTAGACCG | TGCAAAAGGA  | GAGCCTGTAA | GCGGGCACTC |
| 10621 | TTCCGTGGTC  | TGGTGGATAA  | ATTTCGAAGG | GTATCATGGC  | GGACGACCGG | GGTTCGAACC |
| 10681 | CCGATCCGG   | CCGTCCGCCG  | TGATCCATGC | GGTTACCGCC  | CGCGTGTCGA | ACCCAGGTGT |
| 10741 | GCGACGTCAG  | ACAACGGGGG  | AGCGCTCCTT | TTGGCTTCCT  | TCCAGGCGCG | GCGGATGCTG |
| 10801 | CGCTAGCTTT  | TTTGGCCACT  | GGCCGCGCGC | GGCGTAAGCG  | GTTAGGCTGG | AAAGCGAAAG |
| 10861 | CATTAAGTGG  | CTCGCTCCCT  | GTAGCCGGAG | GGTTATTTTC  | CAAGGGTTGA | GTCGCGGGAC |
| 10921 | CCCCGGTTTCG | AGTCTCGGGC  | CGGCCGGAAT | GCGGCGAACG  | GGGGTTTGCC | TCCCCGTCAT |
| 10981 | GCAAGACCCC  | GCTTGCAAAT  | TCCTCCGGAA | ACAGGGACGA  | GCCCCTTTTT | TGCTTTTCCC |
| 11041 | AGATGCATCC  | GGTGCTGCGG  | CAGATGCGCC | CCCCTCCTCA  | GCAGCGGCAA | GAGCAAGAGC |
| 11101 | AGCGGCAGAC  | ATGCAGGGCA  | CCCTCCCCTT | CTCCTACCGC  | GTCAGGAGGG | GCAACATCCG |
| 11161 | CGGCTGACGC  | GGCGGCAGAT  | GGTGATTACG | AACCCCCGCG  | GCGCCGGACC | CGGCACTACT |
| 11221 | TGGACTTGGA  | GGAGGGCGAG  | GGCCTGGCGC | GGCTAGGAGC  | GCCCTCTCCT | GAGCGACACC |
| 11281 | CAAGGGTGCA  | GCTGAAGCGT  | GACACGCGCG | AGGCGTACGT  | GCCGCGGCAG | AACCTGTTTC |
| 11341 | GCGACCGCGA  | GGGAGAGGAG  | CCCGAGGAGA | TGCGGGATCG  | AAAGTTCCAT | GCAGGGCGCG |
| 11401 | AGTTGCGGCA  | TGGCCTGAAC  | CGCGAGCGGT | TGCTGCGCGA  | GGAGGACTTT | GAGCCCAGCG |
| 11461 | CGCGGACCGG  | GATTAGTCCC  | GCGCGCGCAC | ACGTGGCGGC  | CGCCGACCTG | GTAACCGCGT |
| 11521 | ACGAGCAGAC  | GGTGAACCAG  | GAGATTAACT | TTCAAAAAAG  | CTTTAACAAC | CACGTGCGCA |
| 11581 | CGCTTGTTGGC | GCGCGAGGAG  | GTGGCTATAG | GA CTGATGCA | TCTGTGGGAC | TTTGTAAGCG |
| 11641 | CGCTGGAGCA  | AAACCCAAAT  | AGCAAGCCGC | TCATGGCGCA  | GCTGTTTCCT | ATAGTGAGC  |
| 11701 | ACAGCAGGGA  | CAACGAGGCA  | TTCAGGGATG | CGCTGCTAAA  | CATAGTAGAG | CCCGAGGGCC |
| 11761 | GCTGGCTGCT  | CGATTTGATA  | AACATTCTGC | AGAGCATAGT  | GGTGCAGGAG | CGCAGCTTGA |
| 11821 | GCCTGGCTGA  | CAAGGTGGCC  | GCCATTAACT | ATTCCATGCT  | CAGTCTGGGC | AAGTTTTACG |
| 11881 | CCC GCAAGAT | ATACCATAAC  | CCTTACGTTT | CCATAGACAA  | GGAGGTAAAG | ATCGAGGGGT |
| 11941 | TCTACATGCG  | CATGGCGCTG  | AAGGTGCTTA | CCTTGAGCGA  | CGACCTGGGC | GTTTATCGCA |
| 12001 | ACGAGCGCAT  | CCACAAGGCC  | GTGAGCGTGA | GCCGGCGGCG  | CGAGCTCAGC | GACCGCGAGC |
| 12061 | TGATGCACAG  | CCTGCAAAGG  | GCCCTGGCTG | GCACGGGCAG  | CGGCGATAGA | GAGGCCGAGT |
| 12121 | CCTACTTTGA  | CGCGGGCGCT  | GACCTGCGCT | GGGCCCCAAG  | CCGACGCGCC | CTGGAGGCAG |
| 12181 | CTGGGGCCGG  | ACCTGGGCTG  | GCGGTGGCAC | CCGCGCGCGC  | TGGCAACGTC | GGCGGCGTGG |
| 12241 | AGGAATATGA  | CGAGGACGAT  | GAGTACGAGC | CAGAGGACGG  | CGAGTACTAA | GCGGTGATGT |
| 12301 | TTCTGATCAG  | ATGATGCAAG  | ACGCAACGGA | CCCGGCGGTG  | CGGGCGGCGC | TGCAGAGCCA |
| 12361 | GCCGTCCGGC  | CTTA ACTCCA | CGGACGACTG | GCGCCAGGTC  | ATGGACCGCA | TCATGTGCGT |
| 12421 | GA CTGCGCGC | AACCTGACG   | CGTTCCGGCA | GCAGCCGCAG  | GCCAACCGGC | TCTCCGCAAT |
| 12481 | TCTGGAAGCG  | GTGGTCCCGG  | CGCGCGCAAA | CCCCACGCAC  | GAGAAGGTGC | TGGCGATCGT |
| 12541 | AAACGCGCTG  | GCCGAAAACA  | GGGCCATCCG | GCCCGATGAG  | GCCGGCCTGG | TCTACGACGC |
| 12601 | GCTGCTTCAG  | CGCGTGGCTC  | GTTACAACAG | CAGCAACGTG  | CAGACCAACC | TGGACCGGCT |
| 12661 | GGTGGGGGAT  | GTGCGCGAGG  | CCGTGGCGCA | GCGTGAGCGC  | GCGCAGCAGC | AGGGCAACCT |
| 12721 | GGGCTCCATG  | GTTGCACTAA  | ACGCCTTCCT | GAGTACACAG  | CCCGCCAACG | TGCCGCGGGG |
| 12781 | ACAGGAGGAC  | TACACCAACT  | TTGTGAGCGC | ACTGCGGCTA  | ATGGTGACTG | AGACACCGCA |
| 12841 | AAGTGAGGTG  | TATCAGTCCG  | GGCCAGACTA | TTTTTTCCAG  | ACCAGTAGAC | AAGGCCTGCA |

FIG. 17A-5

12901 GACCGTAAAC CTGAGCCAGG CTTTCAAGAA CTTGCAGGGG CTGTGGGGGG TGCGGGCTCC  
12961 CACAGGCGAC CGCGCGACCG TGTCTAGCTT GCTGACGCCC AACTCGCGCC TGTGCTGCT  
13021 GCTAATAGCG CCCTTCACGG ACAGTGGCAG CGTGTCCCGG GACACATACC TAGGTCACCT  
13081 GCTGACACTG TACCGCGAGG CCATAGGTCA GGCGCATGTG GACGAGCATA CTTTCCAGGA  
13141 GATTACAAGT GTTAGCCGCG CGCTGGGGCA GGAGGACACG GGCAGCCTGG AGGCAACCCT  
13201 GAACTACCTG CTGACCAACC GCGGGCAAAA AATCCCCTCG TTGCACAGTT TAAACAGCGA  
13261 GGAGGAGCGC ATTTTGCGCT ATGTGCAGCA GAGCGTGAGC CTTAACCTGA TGCGCGACGG  
13321 GGTAACGCCC AGCGTGCGCG TGGACATGAC CGCGCGCAAC ATGGAACCGG GCATGTATGC  
13381 CTCAAACCGG CCGTTTATCA ATCGCCTAAT GGACTACTTG CATCGCGCGG CCGCCGTGAA  
13441 CCCCAGATAT TTCACCAATG CCATCTTGAA CCCGCACTGG CTACCGCCCC CTGGTTTCTA  
13501 CACCGGGGGA TTCGAGGTGC CCGAGGGTAA CGATGGATTC CTCTGGGACG ACATAGACGA  
13561 CAGCGTGTTT TCCCCGCAAC CGCAGACCCT GCTAGAGTTG CAACAACGCG AGCAGGCAGA  
13621 GGCGGCGCTG CGAAAGGAAA GCTTCCGCAG GCCAAGCAGC TTGTCCGATC TAGGCGCTGC  
13681 GGCCCCGCGG TCAGATGCTA GTAGCCCAT TCCAAGCTTG ATAGGGTCTC TTACCAGCAC  
13741 TCGCACCACC CGCCGCGGCC TGCTGGGCGA GGAGGAGTAC CTAAACAAC CGCTGCTGCA  
13801 GCCGCAGCGC GAAAAGAACC TGCCTCCGGC GTTTCCCAAC AACGGGATAG AGAGCCTAGT  
13861 GGACAAGATG AGTAGATGGA AGACGTATGC GCAGGAGCAC AGGGATGTGC CCGGCCCGCG  
13921 CCCGCCACC CGTCGTCAA GGCACGACCG TCAGCGGGGT CTGGTGTGGG AGGACGATGA  
13981 CTCGGCAGAC GACAGCAGCG TCTTGGATTT GGGAGGGAGT GGCAACCCGT TTGCACACCT  
14041 TCGCCCCAGG CTGGGGAGAA TGTTTTAAAA AAAGCATGAT GCAAAATAAA AAACTCACCA  
14101 AGGCCATGGC ACCGAGCGTT GGTTTTCTTG TATTCCCCTT AGTATGCGGC GCGCGGCGAT  
14161 GTATGAGGAA GGTCCCTCCTC CCTCCTACGA GAGCGTGGTG AGCGCGGCGC CAGTGGCGGC  
14221 GGCGCTGGGT TCACCCTTCG ATGCTCCCCT GGACCCGCCG TTCGTGCCTC CGCGGTACCT  
14281 GCGGCCTACC GGGGGGAGAA ACAGCATCCG TTA CTCTGAG TTGGCACCCC TATTCGACAC  
14341 CACCCGTGTG TACCTTGTGG ACAACAAGTC AACGGATGTG GCATCCCTGA ACTACCAGAA  
14401 CGACCACAGC AACTTTCTAA CCACGGTCAT TCAAAAACAT GACTACAGCC CGGGGGAGGC  
14461 AAGCACACAG ACCATCAATC TTGACGACCG GTCGCACTGG GGCGGCGACC TGA AAACCAT  
14521 CCTGCATACC AACATGCCAA ATGTGAACGA GTTCATGTTT ACCAATAAGT TTAAGGCGCG  
14581 GGTGATGGTG TCGCGCTCGC TTA CTAAGGA CAAACAGGTG GAGCTGAAAT ACGAGTGGGT  
14641 GGAGTTCACG CTGCCCCGAG GCAACTACTC CGAGACCATG ACCATAGACC TTATGAACAA  
14701 CGCGATCGTG GAGCACTACT TGAAAGTGGG CAGGCAGAAC GGGGTCTG GAAAGCGACAT  
14761 CGGGGTAAAG TTTGACACCC GCAACTTCAG ACTGGGGTTT GACCCAGTCA CTGGTCTTGT  
14821 CATGCCTGGG GTATATACAA ACGAAGCCTT CCATCCAGAC ATCATTTTGC TGCCAGGATG  
14881 CGGGGTGGAC TTCACCCACA GCCGCTGAG CAACTTGTTG GGCATCCGCA AGCGGCAACC  
14941 CTTCCAGGAG GGCTTTAGGA TCACCTACGA TGACCTGGAG GGTGGTAACA TTCCCGCACT  
15001 GTTGATGTG GACGCCATC AGGCAAGCTT GAAAGATGAC ACCGAACAGG GCGGGGGTGG  
15061 CGCAGGCGGC GGCAACAACA GTGGCAGCGG CGCGGAAGAG AACTCCAACG CGGCAGCTGC  
15121 GGCAATGCAG CCGGTGGAGG ACATGAACGA TCATGCCATT CGCGGCGACA CCTTTGCCAC  
15181 ACGGGCGGAG GAGAAGCGCG CTGAGGCCGA GGCAGCGGCC GAAGCTGCCG CCCCCGCTGC  
15241 GGAGGCTGCA CAACCCGAGG TCGAGAAGCC TCAGAAGAAA CCGGTGATTA AACCCCTGAC  
15301 AGAGGACAGC AAGAAACGCA GTTACAACCT AATAAGCAAT GACAGCACCT TCACCCAGTA  
15361 CCGCAGCTGG TACCTTGCAT ACAACTACGG CGACCCTCAG GCCGGGATCC GCTCATGGAC  
15421 CCTGCTTTGC ACTCCTGACG TAACCTGCGG CTCGGAGCAG GTATACTGGT CGTTGCCCGA

FIG. 17A-6

|       |             |            |             |             |             |            |
|-------|-------------|------------|-------------|-------------|-------------|------------|
| 15481 | CATGATGCAA  | GACCCCGTGA | CCTTCCGCTC  | CACGCGCCAG  | ATCAGCAACT  | TTCCGGTGGT |
| 15541 | GGGCGCCGAG  | CTGTTGCCCC | TGCACTCCAA  | GAGCTTCTAC  | AACGACCAGG  | CCGTCTACTC |
| 15601 | CCAGCTCATC  | CGCCAGTTTA | CCTCTCTGAC  | CCACGTGTTC  | AATCGCTTTC  | CCGAGAACCA |
| 15661 | GATTTTGGCG  | CGCCCGCCAG | CCCCACCAT   | CACCACCGTC  | AGTGAAAACG  | TTCTGCTCT  |
| 15721 | CACAGATCAC  | GGGACGCTAC | CGCTGCGCAA  | CAGCATCGGA  | GGAGTCCAGC  | GAGTGACCAT |
| 15781 | TACTGACGCC  | AGACGCCGCA | CCTGCCCTTA  | CGTTTACAAG  | GCCCTGGGCA  | TAGTCTCGCC |
| 15841 | GCGCGTCCTA  | TCGAGCCGCA | CTTTTGTAGC  | AAGCATGTCC  | ATCCTTATAT  | CGCCAGCAA  |
| 15901 | TAACACAGGC  | TGGGGCCTGC | GCTTCCCAAG  | CAAGATGTTT  | GGCGGGGCCA  | AGAAGCGCTC |
| 15961 | CGACCAACAC  | CCAGTGCGCG | TGCGCGGGCA  | CTACCGCGCG  | CCCTGGGGCG  | CGCACAAACG |
| 16021 | CGGCCGCACT  | GGGCGCACCA | CCGTGATGA   | CGCCATCGAC  | GCGGTGGTGG  | AGGAGGCGCG |
| 16081 | CAACTACACG  | CCCACGCCGC | CGCCAGTGTC  | CACCGTGGAC  | GCGGCCATTC  | AGACCGTGGT |
| 16141 | GCGCGGAGCC  | CGGCGCTACG | CTAAAATGAA  | GAGACGGCGG  | AGGCGCGTAG  | CACGTCGCCA |
| 16201 | CCGCCGCCGA  | CCCGGCACTG | CCGCCCAACG  | CGCGGCGGCG  | GCCCTGCTTA  | ACCGCGCACG |
| 16261 | TCGCAACGGC  | CGACGGGCGG | CCATGCGAGC  | CGCTCGAAGG  | CTGGCCGCGG  | GTATTGTCAC |
| 16321 | TGTGCCCCCC  | AGGTCCAGGC | GACGAGCGGC  | CGCCGCAGCA  | GCCGCGGCCA  | TTAGTGCTAT |
| 16381 | GACTCAGGGT  | CGCAGGGGCA | ACGTGTACTG  | GGTGC GCGAC | TCGGT TAGCG | GCCTGCGCGT |
| 16441 | GCCCGTGCGC  | ACCCGCCCCC | CGCGCAACTA  | GATTGCAATA  | AAAAACTACT  | TAGACTCGTA |
| 16501 | CTGTTGTATG  | TATCCAGCGG | CGGCGGCGCG  | CATCGAAGCT  | ATGTCCAAGC  | GCAAAATCAA |
| 16561 | AGAAGAGATG  | CTCCAGGTCA | TCGCGCCGGA  | GATCTATGGC  | CCCCCGAAGA  | AGGAAGAGCA |
| 16621 | GGATTACAAG  | CCCCGAAAGC | TAAAGCGGGT  | CAAAAAGAAA  | AAGAAAGATG  | ATGATGATGA |
| 16681 | TGAAC TTGAC | GACGAGGTGG | AACTGTTGCA  | CGCGACCGCG  | CCCAGGCGAC  | GGGTACAGTG |
| 16741 | GAAAGGT CGA | CGCGTAAGAC | GTGTTTTGCG  | ACCCGGCACC  | ACCGTAGTCT  | TTACGCCCGG |
| 16801 | TGAGCGCTCC  | ACCCGCACCT | ACAAGCGCGT  | GTATGATGAG  | GTGTACGGCG  | ACGAGGACCT |
| 16861 | GCTTGAGCAG  | GCCAACGAGC | GCCTCGGGGA  | GTTTGCCTAC  | GGAAAGCGGC  | ATAAGGACAT |
| 16921 | GCTGGCGTTG  | CCGCTGGACG | AGGGCAACCC  | AACACCTAGC  | CTAAAGCCCG  | TGACACTGCA |
| 16981 | GCAGGTGCTG  | CCCGCGCTTG | CACCGTCCGA  | AGAAAAGCGC  | GGCCTAAAGC  | GCGAGTCTGG |
| 17041 | TGACTTGGCA  | CCCACCGTGC | AGCTGATGGT  | ACCCAAGCGT  | CAGCGACTGG  | AAGATGTCTT |
| 17101 | GGAAAAAATG  | ACCGTGGAGC | CTGGGCTGGA  | GCCCGAGGTC  | CGCGTGCGGC  | CAATCAAGCA |
| 17161 | GGTGGCACCG  | GGACTGGGCG | TGCAGACCGT  | GGACGTTTAC  | ATACCCACCA  | CCAGTAGCAC |
| 17221 | TAGTATTGCC  | ACTGCCACAG | AGGGCATGGA  | GACACAAACG  | TCCCCGGTTG  | CCTCGGCGGT |
| 17281 | GGCAGATGCC  | GCGGTGCAGG | CGGCCGCTGC  | GGCCGCGTCC  | AAGACCTCTA  | CGGAGGTGCA |
| 17341 | AACGGACCCG  | TGGATGTTTC | GTGTTTCAGC  | CCCCCGGCGT  | CCGCGCCGTT  | CAAGGAAGTA |
| 17401 | CGGCGCCGCC  | AGCGCGCTAC | TGCCCCGAATA | TGCCCTACAT  | CCTTCCATCG  | CGCCTACCCC |
| 17461 | CGGCTATCGT  | GGCTACACCT | ACCGCCCCAG  | AAGACGAGCA  | ACTACCCGAC  | GCCGAACCAC |
| 17521 | CACTGGAACC  | CGCCGCCGCC | GTCGCCGTCG  | CCAGCCCGTG  | CTGGCCCCGA  | TTTCCGTGCG |
| 17581 | CAGGGTGGCT  | CGCGAAGGAG | GCAGGACCCT  | GGTGCTGCCA  | ACAGCGCGCT  | ACCACCCCAG |
| 17641 | CATCGTTTAA  | AAGCCGGTCT | TTGTGGTTCT  | TGCAGATATG  | GCCCTCACCT  | GCCGCTCCG  |
| 17701 | TTTCCCGGTG  | CCGGGATTCC | GAGGAAGAAT  | GCACCGTAGG  | AGGGGCATGG  | CCGGCCACGG |
| 17761 | CCTGACGGGC  | GGCATGCGTC | GTGCGCACCA  | CCGGCGGCGG  | CGCGCGTCGC  | ACCGTCGCAT |
| 17821 | GCGCGGCGGT  | ATCCTGCCCC | TCCTTATTCC  | ACTGATCGCC  | GCGGCGATTG  | GCGCCGTGCC |
| 17881 | CGGAATTGCA  | TCCGTGGCCT | TGCAGGCGCA  | GAGACACTGA  | TTAAAAACAA  | GTACATGTG  |
| 17941 | GAAAAATCAA  | AATAAAAGTC | TGGACTCTCA  | CGCTCGCTTG  | GTCCTGTAAC  | TATTTTGTAG |
| 18001 | AATGGAAGAC  | ATCAACTTTG | CGTCACTGGC  | CCC GCGACAC | GGCTCGCGCC  | CGTTCATGGG |

FIG. 17A-7

|       |            |             |            |             |            |            |
|-------|------------|-------------|------------|-------------|------------|------------|
| 18061 | AAACTGGCAA | GATATCGGCA  | CCAGCAATAT | GAGCGGTGGC  | GCCTTCAGCT | GGGGCTCGCT |
| 18121 | GTGGAGCGGC | ATTAAAAATT  | TCGGTTCGCG | CGTTAAGAAC  | TATGGCAGCA | AAGCCTGGAA |
| 18181 | CAGCAGCACA | GGCCAGATGC  | TGAGGGACAA | GTTGAAAGAG  | CAAAATTTCC | AACAAAAGGT |
| 18241 | GGTAGATGGC | CTGGCCTCTG  | GCATTAGCGG | GGTGGTGGAC  | CTGGCCAACC | AGGCAGTGCA |
| 18301 | AAATAAGATT | AACAGTAAGC  | TTGATCCCCG | CCCTCCCGTA  | GAGGAGCCTC | CACCGGCCGT |
| 18361 | GGAGACAGTG | TCTCCAGAGG  | GGCGTGGCGA | AAAGCGTCCG  | CGACCCGACA | GGGAAGAAAC |
| 18421 | TCTGGTGACG | CAAATAGACG  | AGCCTCCCTC | GTACGAGGAG  | GCACTAAAGC | AAGGCCTGCC |
| 18481 | CACCACCCGT | CCCATCGCGC  | CCATGGCTAC | CGGAGTGCTG  | GGCCAGCACA | CACCCGTAAC |
| 18541 | GCTGGACCTG | CCTCCCCCGG  | CCGACACCCA | GCAGAAACCT  | GTGCTGCCAG | GCCCGTCCGC |
| 18601 | CGTTGTTGTA | ACCCGTCCCTA | GCCGCGCGTC | CCTGCGCCGC  | GCCGCCAGCG | GTCCGCGATC |
| 18661 | GTTGCGGCC  | GTAGCCAGTG  | GCAACTGGCA | AAGCACACTG  | AACAGCATCG | TGGGTTTGGG |
| 18721 | GGTGCAATCC | CTGAAGCGCC  | GACGATGCTT | CTGATAGCTA  | ACGTGTCGTA | TGTGTGTCAT |
| 18781 | GTATGCGTCC | ATGTCGCCGC  | CAGAGGAGCT | GCTGAGCCGC  | CGCGCGCCCG | CTTTCCAAGA |
| 18841 | TGGCTACCCC | TTGATGATG   | CCGCAGTGGT | CTTACATGCA  | CATCTCGGGC | CAGGACGCCT |
| 18901 | CGGAGTACCT | GAGCCCCGGG  | CTGGTGCAGT | TCGCCCCGCG  | CACCGAGACG | TACTTCAGCC |
| 18961 | TGAATAACAA | GTTTAGAAAC  | CCCACGGTGG | CGCCTACGCA  | CGACGTGACC | ACAGACCGGT |
| 19021 | CTCAGCGTTT | GACGCTGCGG  | TTCATCCCCG | TGGACCGCGA  | GGATACTGCG | TACTCGTACA |
| 19081 | AGGCGCGGTT | CACCCTAGCT  | GTGGGTGATA | ACCGTGTGCT  | AGACATGGCT | TCCACGTACT |
| 19141 | TTGACATCCG | CGGCGTGCTG  | GACAGGGGCC | CTACTTTTAA  | GCCCTACTCT | GGCACTGCCT |
| 19201 | ACAACGCACT | GGCCCCAAG   | GGTGCCCCCA | ACTCGTGCGA  | GTGGGAACAA | AATGAACTG  |
| 19261 | CACAAGTGGA | TGCTCAAGAA  | CTTGACGAAG | AGGAGAATGA  | AGCCAATGAA | GCTCAGGCGC |
| 19321 | GAGAACAGGA | ACAAGCTAAG  | AAAACCCATG | TATATGCCCA  | GGCTCCACTG | TCCGGAATAA |
| 19381 | AAATAACTAA | AGAAGGTCTA  | CAAATAGGAA | CTGCCGACGC  | CACAGTAGCA | GGTGCCGGCA |
| 19441 | AAGAAATTTT | CGCAGACAAA  | ACTTTTCAAC | CTGAACCACA  | AGTAGGAGAA | TCTCAATGGA |
| 19501 | ACGAAGCGGA | TGCCACAGCA  | GCTGGTGGAA | GGGTTCTTAA  | AAAGACAAC  | CCCATGAAAC |
| 19561 | CCTGCTATGG | CTCATACGCT  | AGACCCACCA | ATTCCAACGG  | CGGACAGGGC | GTTATGGTTG |
| 19621 | AACAAAATGG | TAAATTGGA   | AGTCAAGTCG | AAATGCAATT  | TTTTTCCACA | TCCACAAATG |
| 19681 | CCACAAATGA | AGTTAACAAT  | ATACAACCAA | CAGTTGTATT  | GTACAGCGAA | GATGTAAACA |
| 19741 | TGGAAACTCC | AGATACTCAT  | CTTTCTTATA | AACCTAAAAT  | GGGGGATAAA | AATGCCAAAG |
| 19801 | TCATGCTTGG | ACAACAAGCA  | ATGCCAAACA | GACCAAAATTA | CATTGCTTTT | AGAGACAATT |
| 19861 | TTATTGGTCT | CATGTATTAC  | AACAGCACAG | GTAACATGGG  | TGTCCTTGCT | GGTCAGGCAT |
| 19921 | CGCAGTTGAA | CGCTGTTGTA  | GATTTGCAAG | ACAGAAACAC  | AGAGCTGTCC | TACCAGCTTT |
| 19981 | TGCTTGATTC | AATTGGCGAC  | AGAACAAGAT | ACTTTTCAAT  | GTGGAATCAA | GCTGTTGACA |
| 20041 | GCTATGATCC | AGATGTCAGA  | ATTATTGAGA | ACCATGGAAC  | TGAGGATGAG | TTGCCAAATT |
| 20101 | ATTGCTTTCC | TCTTGGTGGA  | ATTGGGATTA | CTGACACTTT  | TCAAGCTGTT | AAAACAAC   |
| 20161 | CTGCTAACGG | GGACCAAGGC  | AATACTACCT | GGCAAAAAGA  | TTCAACATTT | GCAGAACGCA |
| 20221 | ATGAAATAGG | GGTGGGAAAT  | AACCTTGCCA | TGGAAATTAA  | CCTGAATGCC | AACCTATGGA |
| 20281 | GAAATTTCC  | TTACTCCAAT  | ATTGCGCTGT | ACCTGCCAGA  | CAAGCTAAAA | TACAACCCCA |
| 20341 | CCAATGTGGA | AATATCTGAC  | AACCCCAACA | CCTACGACTA  | CATGAACAAG | CGAGTGGTGG |
| 20401 | CTCCTGGGCT | TGTAGACTGC  | TACATTAACC | TTGGGGCGCG  | CTGGTCTCTG | GACTACATGG |
| 20461 | ACAACGTTAA | TCCCTTTAAC  | CACCACCGCA | ATGCGGGCCT  | GCGTTACCGC | TCCATGTTGT |
| 20521 | TGGGAAACGG | CCGCTACGTG  | CCCTTTTACA | TTCAGGTGCC  | CCAAAAGTTT | TTTGCCATTA |
| 20581 | AAAACCTCCT | CCTCCTGCCA  | GGCTCATACA | CATATGAATG  | GAACCTCAGG | AAGGATGTTA |

FIG. 17A-8



|       |            |            |            |            |             |            |
|-------|------------|------------|------------|------------|-------------|------------|
| 20641 | ACATGGTTCT | GCAGAGCTCT | CTGGGAAACG | ACCTTAGAGT | TGACGGGGCT  | AGCATTAAGT |
| 20701 | TTGACAGCAT | TTGTCTTTAC | GCCACCTTCT | TCCCCATGGC | CCACAACACG  | GCCTCCACGC |
| 20761 | TGGAAGCCAT | GCTCAGAAAT | GACACCAACG | ACCAGTCCTT | TAATGACTAC  | CTTTCCGCCG |
| 20821 | CCAACATGCT | ATATCCCATA | CCCGCCAACG | CCACCAACGT | GCCCATCTCC  | ATCCCATCGC |
| 20881 | GCAACTGGGC | AGCATTTTCG | GGTTGGGCCT | TCACACGCTT | GAAGACAAAG  | GAAACCCCTT |
| 20941 | CCCTGGGATC | AGGCTACGAC | CCTTACTACA | CCTACTCTGG | CTCCATACCA  | TACCTTGACG |
| 21001 | GAACCTTCTA | TCTTAATCAC | ACCTTTAAGA | AGGTGGCCAT | TACTTTTGAC  | TCTTCTGTTA |
| 21061 | GCTGGCCGGG | CAACGACCGC | CTGCTTACTC | CCAATGAGTT | TGAGATTAAG  | CGCTCAGTTG |
| 21121 | ACGGGGAGGG | CTATAACGTA | GCTCAGTGCA | ACATGACAAA | GGACTGGTTC  | CTAGTGCAGA |
| 21181 | TGTTGGCCAA | CTACAATATT | GGCTACCAGG | GCTTCTACAT | TCCAGAAAGC  | TACAAAGACC |
| 21241 | GCATGTACTC | GTTCTTCAGA | AACCTCCAGC | CCATGAGCCG | GCAAGTGGTG  | GACGATACTA |
| 21301 | AATACAAAGA | TTATCAGCAG | GTTGGAATTA | TCCACCAGCA | TAACAACCTA  | GGCTTCGTAG |
| 21361 | GCTACCTCGC | TCCCACCATG | CGCGAGGGAC | AAGCTTACCC | CGCTAATGTT  | CCCTACCCAC |
| 21421 | TAATAGGCAA | AACCGCGGTT | GATAGTATTA | CCCAGAAAAA | GTTTCTTTGC  | GACCGCACCC |
| 21481 | TGTGGCGCAT | CCCCTTCTCC | AGTAACTTTA | TGTCCATGGG | TGCGCTCACA  | GACCTGGGCC |
| 21541 | AAAACCTTCT | CTACGCAAAC | TCCGCCCACG | CGCTAGACAT | GACCTTTGAG  | GTGGATCCCA |
| 21601 | TGGACGAGCC | CACCCTTCTT | TATGTTTTGT | TTGAAGTCTT | TGACGTGGTC  | CGTGTGCACC |
| 21661 | AGCCGCACCG | CGGCGTCATC | GAGACCGTGT | ACCTGCGCAC | GCCCTTCTCG  | GCCGGCAACG |
| 21721 | CCACAACATA | AAGAAGCAAG | CAACATCAAC | AACAGCTGCC | GCCATGGGCT  | CCAGTGAGCA |
| 21781 | GGAAGTGAAA | GCCATTGTCA | AAGATCTTGG | TTGTGGGCCA | TATTTTTTGG  | GCACCTATGA |
| 21841 | CAAGCGCTTC | CCAGGCTTTG | TTTCCCCACA | CAAGCTCGCC | TGCGCCATAG  | TTAACACGGC |
| 21901 | CGGTGCGGAG | ACTGGGGGGC | TACACTGGAT | GGCCTTTGCC | TGGAACCCGC  | GCTCAAAAAC |
| 21961 | ATGCTACCTC | TTTGAGCCCT | TTGGCTTTTC | TGACCAACGT | CTCAAGCAGG  | TTTACCAGTT |
| 22021 | TGAGTACGAG | TCACTCCTGC | GCCGTAGCGC | CATTGCCTCT | TCCCCGACC   | GCTGTATAAC |
| 22081 | GCTGGAAAAG | TCCACCCAAA | GCGTGCAGGG | GCCCAACTCG | GCCGCTGTG   | GCCTATTCTG |
| 22141 | CTGCATGTTT | CTCCACGCCT | TTGCCAACTG | GCCCCAAACT | CCCATGGATC  | ACAACCCAC  |
| 22201 | CATGAACCTT | ATTACCGGGG | TACCCAACTC | CATGCTTAAC | AGTCCCCAGG  | TACAGCCCAC |
| 22261 | CCTGCGCCGC | AACCAGGAAC | AGCTCTACAG | CTTCTGGAG  | CGCCACTCGC  | CCTACTTCCG |
| 22321 | CAGCCACAGT | GCGCAAATTA | GGAGCGCCAC | TTCTTTTTGT | CACTTGAAAA  | ACATGTAAAA |
| 22381 | ATAATGTACT | AGGAGACACT | TTCAATAAAG | GCAAATGTTT | TTATTTGTAC  | ACTCTCGGGT |
| 22441 | GATTATTTAC | CCCCACCCCT | GCCGTCTGCG | CCGTTTAAAA | ATCAAAGGGG  | TTCTGCCGCG |
| 22501 | CATCGCTATG | CGCCACTGGC | AGGGACACGT | TGCGATACTG | GTGTTTAGTG  | CTCCACTTAA |
| 22561 | ACTCAGGCAC | AACCATCCGC | GGCAGCTCGG | TGAAGTTTTC | ACTCCACAGG  | CTGCGCACCA |
| 22621 | TCACCAACGC | GTTTAGCAGG | TCGGGCGCCG | ATATCTTGAA | GTCGCAGTTG  | GGGCCTCCGC |
| 22681 | CCTGCGCGCG | CGAGTTGCGA | TACACAGGGT | TACAGCACTG | GAACACTATC  | AGCGCCGGGT |
| 22741 | GGTGCACGCT | GGCCAGCACG | CTCTTGTCGG | AGATCAGATC | CGCGTCCAGG  | TCCTCCGCGT |
| 22801 | TGCTCAGGGC | GAACGGAGTC | AACCTTGGTA | GCTGCCTTCC | CAAAAAGGGT  | GCATGCCCAG |
| 22861 | GCTTTGAGTT | GCACTCGCAC | CGTAGTGGCA | TCAGAAGGTG | ACCGTGCCCA  | GTCTGGGCGT |
| 22921 | TAGGATACAG | CGCCTGCATG | AAAGCCTTGA | TCTGCTTAAA | AGCCACCTGA  | GCCTTTGCGC |
| 22981 | CTTCAGAGAA | GAACATGCCG | CAAGACTTGC | CGGAAAACTG | ATTGGCCGGA  | CAGGCCGCGT |
| 23041 | CATGCACGCA | GCACCTTGCG | TCGGTGTTGG | AGATCTGCAC | CACATTTTCGG | CCCCACCGGT |
| 23101 | TCTTCACGAT | CTTGCCCTTG | CTAGACTGCT | CCTTCAGCGC | GCGCTGCCCG  | TTTTCGCTCG |
| 23161 | TCACATCCAT | TTCAATCACG | TGCTCCTTAT | TTATCATAAT | GCTCCCGTGT  | AGACACTTAA |

FIG. 17A-9

|       |             |            |             |            |            |             |
|-------|-------------|------------|-------------|------------|------------|-------------|
| 23221 | GCTCGCCTTC  | GATCTCAGCG | CAGCGGTGCA  | GCCACAACGC | GCAGCCCGTG | GGCTCGTGGT  |
| 23281 | GCTTGTAGGT  | TACCTCTGCA | AACGACTGCA  | GGTACGCCTG | CAGGAATCGC | CCCATCATCG  |
| 23341 | TCACAAAGGT  | CTTGTTGCTG | GTGAAGGTCA  | GCTGCAACCC | GCGGTGCTCC | TCGTTTAGCC  |
| 23401 | AGGTCTTGCA  | TACGGCCGCC | AGAGCTTCCA  | CTTGGTCAGG | CAGTAGCTTG | AAGTTTGCCT  |
| 23461 | TTAGATCGTT  | ATCCACGTGG | TACTTGTTCA  | TCAACGCGCG | CGCAGCCTCC | ATGCCCTTCT  |
| 23521 | CCCACGCAGA  | CACGATCGGC | AGGCTCAGCG  | GGTTTATCAC | CGTGCTTTCA | CTTTCCGCTT  |
| 23581 | CACTGGACTC  | TTCCTTTTCC | TCTTGCATCC  | GCATACCCCG | CGCCACTGGG | TCGTCTTCAT  |
| 23641 | TCAGCCGCCG  | CACCGTGCGC | TTACCTCCCT  | TGCCGTGCTT | GATTAGCACC | GGTGGGTTGC  |
| 23701 | TGAAACCCAC  | CATTTGTAGC | GCCACATCTT  | CTCTTTCTTC | CTCGCTGTCC | ACGATCACCT  |
| 23761 | CTGGGGATGG  | CGGGCGCTCG | GGCTTGGGAG  | AGGGGCGCTT | CTTTTCTTTT | TTGGACGCAA  |
| 23821 | TGGCCAAATC  | CGCCGTCGAG | GTGATGGGCC  | GCGGGCTGGG | TGTGCGCGGC | ACCAGCGCAT  |
| 23881 | CTTGTGACGA  | GTCTTCTTCG | TCCTCGGACT  | CGAGACGCCG | CCTCAGCCGC | TTTTTTGGGG  |
| 23941 | GCGCGCGGGG  | AGGCGGCGGC | GACGGCGACG  | GGGACGAGAC | GTCTCCATG  | GTTGGTGGAC  |
| 24001 | GTGCGCCCGC  | ACCGCGTCCG | CGCTCGGGGG  | TGGTTTCGCG | CTGCTCCTCT | TCCCAGCTGG  |
| 24061 | CCATTTCCCTT | CTCCTATAGG | CAGAAAAAGA  | TCATGGAGTC | AGTCGAGAAG | GAGGACAGCC  |
| 24121 | TAACCGCCCC  | CTTTGAGTTC | GCCACCACCG  | CCTCCACCGA | TGCCGCCAAC | GCGCCTACCA  |
| 24181 | CCTTCCCCGT  | CGAGGCACCC | CCGCTTGAGG  | AGGAGGAAGT | GATTATCGAG | CAGGACCCAG  |
| 24241 | GTTTTGTAAG  | CGAAGACGAC | GAAGATCGCT  | CAGTACCAAC | AGAGGATAAA | AAGCAAGACC  |
| 24301 | AGGACGACGC  | AGAGGCAAAC | GAGGAACAAG  | TCGGGCGGGG | GGACCAAAGG | CATGGCGACT  |
| 24361 | ACCTAGATGT  | GGGAGACGAC | GTGCTGTTGA  | AGCATCTGCA | GCGCCAGTGC | GCCATTATCT  |
| 24421 | GCGACGCGTT  | GCAAGAGCGC | AGCGATGTGC  | CCCTCGCCAT | AGCGGATGTC | AGCCTTGCCT  |
| 24481 | ACGAACGCCA  | CCTGTTCTCA | CCGCGCGTAC  | CCCCCAAACG | CCAAGAAAAC | GGCACATGCG  |
| 24541 | AGCCCAACCC  | GCGCCTCAAC | TTCTACCCCG  | TATTTGCCGT | GCCAGAGGTG | CTTGCCACCT  |
| 24601 | ATCACATCTT  | TTTCCAAAAC | TGCAAGATAC  | CCCTATCCTG | CCGTGCCAAC | CGCAGCCGAG  |
| 24661 | CGGACAAGCA  | GCTGGCCTTG | CGGCAGGGCG  | CTGTCATACC | TGATATCGCC | TCGCTCGACG  |
| 24721 | AAGTGCCAAA  | AATCTTTGAG | GGTCTTGAGC  | GCGACGAGAA | GCGCGCGGCA | AACGCTCTGC  |
| 24781 | AACAAGAAAA  | CAGCGAAAAT | GAAAGTCACT  | GTGGAGTGCT | GGTGGAACCT | GAGGGTGACA  |
| 24841 | ACGCGCGCCT  | AGCCGTGCTG | AAACGCAGCA  | TCGAGGTCAC | CCACTTTGCC | TACCCGGCAC  |
| 24901 | TTAACCTACC  | CCCCAAGGTT | ATGAGCACAG  | TCATGAGCGA | GCTGATCGTG | CGCCGTGCAC  |
| 24961 | GACCCCTGGA  | GAGGGATGCA | AAC TTGCAAG | AACAAACCGA | GGAGGGCCTA | CCCGCAGTTG  |
| 25021 | GCGATGAGCA  | GCTGGCGCGC | TGGCTTGAGA  | CGCGCGAGCC | TGCCGACTTG | GAGGAGCGAC  |
| 25081 | GCAAGCTAAT  | GATGGCCGCA | GTGCTTGTTA  | CCGTGGAGCT | TGAGTGCATG | CAGCGGTTCT  |
| 25141 | TTGCTGACCC  | GGAGATGCAG | CGCAAGCTAG  | AGGAAACGTT | GCACTACACC | TTTCGCCAGG  |
| 25201 | GCTACGTGCG  | CCAGGCCGTC | AAAATTTCCA  | ACGTGGAGCT | CTGCAACCTG | GTCTCTTACC  |
| 25261 | TTGGAATTTT  | GCACGAAAAC | CGCCTTGGGC  | AAAACGTGCT | TCATTCCACG | CTCAAGGGCG  |
| 25321 | AGGCGCGCCG  | CGACTACGTC | CGCGACTGCG  | TTTACTTATT | TCTGTGCTAC | ACCTGGCAAA  |
| 25381 | CGGCCATGGG  | CGTGTGGCAG | CAGTGCCTGG  | AGGAGCGCAA | CCTGAAGGAG | CTGCAGAAGC  |
| 25441 | TGCTAAAGCA  | AAACTTGAAG | GACCTATGGA  | CGGCCTTCAA | CGAGCGCTCC | GTGGCCGCGC  |
| 25501 | ACCTGGCGGA  | CATTATCTTC | CCCGAACGCC  | TGCTTAAAC  | CCTGCAACAG | GGTCTGCCAG  |
| 25561 | ACTTCACCAG  | TCAAAGCATG | TTGCAAAACT  | TTAGGAACTT | TATCCTAGAG | CGTTCAGGAA  |
| 25621 | TTCTGCCCCG  | CACCTGCTGT | GCGCTTCCTA  | GCGACTTTGT | GCCCATTAAG | TACCGTGAAT  |
| 25681 | GCCCTCCGCC  | GCTTTGGGGT | CACTGCTACC  | TTCTGCAGCT | AGCCAACTAC | CTTGCCCTACC |
| 25741 | ACTCCGACAT  | CATGGAAGAC | GTGAGCGGTG  | ACGGCCTACT | GGAGTGTCAC | TGTCGCTGCA  |

FIG. 17A-10

|       |             |            |            |             |            |             |
|-------|-------------|------------|------------|-------------|------------|-------------|
| 25801 | ACCTATGCAC  | CCCGCACCGC | TCCCTGGTCT | GCAATTCACA  | ACTGCTTAGC | GAAAGTCAAA  |
| 25861 | TTATCGGTAC  | CTTTGAGCTG | CAGGGTCCCT | CGCCTGACGA  | AAAGTCCGCG | GCTCCGGGGT  |
| 25921 | TGAAACTCAC  | TCCGGGGCTG | TGGACGTCGG | CTTACCTTCG  | CAAATTTGTA | CCTGAGGACT  |
| 25981 | ACCACGCCCC  | CGAGATTAGG | TTCTACGAAG | ACCAATCCCG  | CCCGCCAAAT | GCGGAGCTTA  |
| 26041 | CCGCTGCGT   | CATTACCCAG | GGCCACATCC | TTGGCCAATT  | GCAAGCCATT | AACAAAGCCC  |
| 26101 | GCCAAGAGTT  | TCTGCTACGA | AAGGGACGGG | GGGTTTACTT  | GGACCCCCAG | TCCGGCGAGG  |
| 26161 | AGCTCAACCC  | AATCCCCCGG | CCGCCGCAGC | CCTATCAGCA  | GCCGCGGGCC | CTTGCTTCCC  |
| 26221 | AGGATGGCAC  | CCAAAAAGAA | GCTGCAGCTG | CCGCCGCCGC  | CACCCACGGA | CGAGGAGGAA  |
| 26281 | TACTGGGACA  | GTCAGGCAGA | GGAGGTTTTG | GACGAGGAGG  | AGGAGATGAT | GGAAGACTGG  |
| 26341 | GACAGCCTAG  | ACGAGGAAGC | TTCCGAGGCC | GAAGAGGTGT  | CAGACGAAAC | ACCGTCACCC  |
| 26401 | TCGGTCGCAT  | TCCCCTCGCC | GGCGCCCCAG | AAATCGGCAA  | CCGTTCCCAG | CATTGCTACA  |
| 26461 | ACCTCCGCTC  | CTCAGGCGCC | GCCGGCACTG | CCCGTTTCGCC | GACCCAACCG | TAGATGGGAC  |
| 26521 | ACCACTGGAA  | CCAGGGCCGG | TAAGTCTAAG | CAGCCGCCGC  | CGTTAGCCCA | AGAGCAACAA  |
| 26581 | CAGCGCCAAAG | GCTACCGCTC | GTGGCGCGTG | CACAAGAACG  | CCATAGTTGC | TTGCTTGCAA  |
| 26641 | GACTGTGGGG  | GCAACATCTC | CTTCGCCCGC | CGCTTTCTTC  | TCTACCATCA | CGGCGTGGCC  |
| 26701 | TTCCCCCGTA  | ACATCCTGCA | TTACTACCGT | CATCTCTACA  | GCCCCTACTG | CACCGGCGGC  |
| 26761 | AGCGGCAGCA  | ACAGCAGCGG | CCACGCAGAA | GCAAAGGCGA  | CCGGATAGCA | AGACTCTGAC  |
| 26821 | AAAGCCCCAAG | AAATCCACAG | CGGCGGCAGC | AGCAGGAGGA  | GGAGCACTGC | GTCTGGCGCC  |
| 26881 | CAACGAACCC  | GTATCGACCC | GCGAGCTTAG | AAACAGGATT  | TTTCCCCTC  | TGTATGCTAT  |
| 26941 | ATTTCAACAG  | AGCAGGGGCC | AAGAACAAGA | GCTGAAAATA  | AAAAACAGGT | CTCTGCGCTC  |
| 27001 | CCTCACCCGC  | AGCTGCCTGT | ATCACAAAAG | CGAAGATCAG  | CTTCGGCGCA | CGCTGGAAGA  |
| 27061 | CGCGGAGGCT  | CTCTTCAGCA | AATACTGCGC | GCTGACTCTT  | AAGGACTAGT | TTCGCGCCCT  |
| 27121 | TTCTCAAATT  | TAAGCGCGAA | AACTACGTCA | TCTCCAGCGG  | CCACACCCGG | CGCCAGCACC  |
| 27181 | TGTCGTCAGC  | GCCATTATGA | GCAAGGAAAT | TCCCACGCCC  | TACATGTGGA | GTTACCAGCC  |
| 27241 | ACAAATGGGA  | CTTGCGGCTG | GAGCTGCCCA | AGACTACTCA  | ACCCGAATAA | ACTACATGAG  |
| 27301 | CGCGGGACCC  | CACATGATAT | CCCGGGTCAA | CGGAATCCGC  | GCCCACCGAA | ACCGAATTCT  |
| 27361 | CCTCGAACAG  | GCGGCTATTA | CCACCACACC | TCGTAATAAC  | CTTAATCCCC | GTAGTTGGCC  |
| 27421 | CGCTGCCCTG  | GTGTACCAGG | AAAGTCCCGC | TCCCACCACT  | GTGGTACTTC | CCAGAGACGC  |
| 27481 | CCAGGCCGAA  | GTTCAGATGA | CTAACTCAGG | GGCGCAGCTT  | GCGGGCGGCT | TTCGTCACAG  |
| 27541 | GGTGCGGTCG  | CCCGGGCAGG | GTATAACTCA | CCTGAAAATC  | AGAGGGCGAG | GTATTTCAGCT |
| 27601 | CAACGACGAG  | TCGGTGAGCT | CCTCTCTTGG | TCTCCGTCCG  | GACGGGACAT | TTCAGATCGG  |
| 27661 | CGGCGCTGGC  | CGCTCTTCAT | TTACGCCCCG | TCAGGCGATC  | CTAACTCTGC | AGACCTCGTC  |
| 27721 | CTCGGAGCCG  | CGCTCCGGAG | GCATTGGAAC | TCTACAATTT  | ATTGAGGAGT | TCGTGCCTTC  |
| 27781 | GGTTTACTTC  | AACCCCTTTT | CTGGACCTCC | CGGCCACTAC  | CCGGACCAGT | TTATTCCCAA  |
| 27841 | CTTTGACGCG  | GTAAAAGACT | CGGCGGACGG | CTACGACTGA  | ATGACCAGTG | GAGAGGCAGA  |
| 27901 | GCAACTGCGC  | CTGACACACC | TCGACCACTG | CCGCCGCCAC  | AAGTGCTTTG | CCCGCGGCTC  |
| 27961 | CGGTGAGTTT  | TGTTACTTTG | AATTGCCCGA | AGAGCATATC  | GAGGGCCCGG | CGCACGGCGT  |
| 28021 | CCGGCTCACC  | ACCCAGGTAG | AGCTTACACG | TAGCCTGATT  | CGGGAGTTTA | CCAAGCGCCC  |
| 28081 | CCTGCTAGTG  | GAGCGGGAGC | GGGGTCCCTG | TGTTCTGACC  | GTGGTTTGCA | ACTGTCCTAA  |
| 28141 | CCCTGGATTA  | CATCAAGATC | TTTGTTGTCA | TCTCTGTGCT  | GAGTATAATA | AATACAGAAA  |
| 28201 | TTAGAATCTA  | CTGGGGCTCC | TGTCGCCATC | CTGTGAACGC  | CACCGTTTTT | ACCCACCCAA  |
| 28261 | AGCAGACCAA  | AGCAAACCTC | ACCTCCGGTT | TGCACAAGCG  | GGCCAATAAG | TACCTTACCT  |
| 28321 | GGTACTTTAA  | CGGCTCTTCA | TTTGTAATTT | ACAACAGTTT  | CCAGCGAGAC | GAAGTAAGTT  |

FIG. 17A-11

|       |             |             |            |             |            |             |
|-------|-------------|-------------|------------|-------------|------------|-------------|
| 28381 | TGCCACACAA  | CCTTCTCGGC  | TTCAACTACA | CCGTCAAGAA  | AAACACCACC | ACCACCCTCC  |
| 28441 | TCACCTGCCG  | GGAACGTACG  | AGTGCGTCAC | CGGTTGCTGC  | GCCCACACCT | ACAGCCTGAG  |
| 28501 | CGTAACCAGA  | CATTACTCCC  | ATTTTCCCAA | AACAGGAGGT  | GAGCTCAACT | CCCGGAACTC  |
| 28561 | AGGTCAAAAA  | AGCATTTTGC  | GGGGTGCTGG | GATTTTTTTAA | TTAAGTATAT | GAGCAATTCA  |
| 28621 | AGTAACTCTA  | CAAGCTTGTC  | TAATTTTTCT | GGAATTGGGG  | TCGGGGTTAT | CCTTACTCTT  |
| 28681 | GTAATTCTGT  | TTATTCTTAT  | ACTAGCACTT | CTGTGCCTTA  | GGGTTGCCGC | CTGCTGCACG  |
| 28741 | CACGTTTGTA  | CCTATTGTCA  | GCTTTTTTAA | CGCTGGGGGC  | GACATCCAAG | ATGAGGTACA  |
| 28801 | TGATTTTAGG  | CTTGCTCGCC  | CTTGCGGCAG | TCTGCAGCGC  | TGCCAAAAAG | GTTGAGTTTA  |
| 28861 | AGGAACCAGC  | TTGCAATGTT  | ACATTTAAAT | CAGAAGCTAA  | TGAATGCACT | ACTCTTATAA  |
| 28921 | AATGCACCAC  | AGAACATGAA  | AAGCTTATTA | TTGCCACAA   | AGACAAAATT | GGCAAGTATG  |
| 28981 | CTGTATATGC  | TATTTGGCAG  | CCAGGTGACA | CTAACGACTA  | TAATGTCACA | GTCTTCCAAG  |
| 29041 | GTGAAAATCG  | TAAAACTTTT  | ATGTATAAAT | TTCCATTTTA  | TGAAATGTGC | GATATTACCA  |
| 29101 | TGTACATGAG  | CAAAACAGTAC | AAGTTGTGGC | CCCCACAAAA  | GTGTTTAGAG | AACACTGGCA  |
| 29161 | CCTTTTGTTC  | CACCGCTCTG  | CTTATTACAG | CGCTTGCTTT  | GGTATGTACC | TTACTTTATC  |
| 29221 | TCAAATACAA  | AAGCAGACGC  | AGTTTTATTG | ATGAAAAGAA  | AATGCCTTGA | TTTTCCGCTT  |
| 29281 | GCTTGATATC  | CCCTGGACAA  | TTTACTCTAT | GTGGGATATG  | CGCCAGGCGG | GAAAGATTAT  |
| 29341 | ACCCACAACC  | TTCAAATCAA  | ACTTTCCTGG | ACGTTAGCGC  | CTGACTTCTG | CCAGCGCCTG  |
| 29401 | CACTGCAAAAT | TTGATCAAAC  | CCAGCTTCAG | CTTGCCTGCT  | CCAGAGATGA | CCGGCTCAAC  |
| 29461 | CATCGCGCCC  | ACAACGGACT  | ATCGCAACAC | CACTGCTACC  | GGACTAAAAT | CTGCCCTAAA  |
| 29521 | TTTACCCCAA  | GTTCAATGCT  | TTGTCAATGA | CTGGGCGAGC  | TTGGGCATGT | GGTGGTTTTT  |
| 29581 | CATAGCGCTT  | ATGTTTGTTC  | GCCTTATTAT | TATGTGGCTT  | ATTTGTGTC  | TAAAGCGCAG  |
| 29641 | ACGCGCCAGA  | CCCCCATCT   | ATAGGCCTAT | CATTGTGCTC  | AACCCACACA | ATGAAAAAAT  |
| 29701 | TCATAGATTG  | GACGGTCTCA  | AACCATGTTC | TCTTCTTTTA  | CAGTATGATT | AAATGAGACA  |
| 29761 | TGATTCCCTG  | AGTCCTTATA  | TTATTGACCC | TTGTTGCGCT  | TTTCTGTGCG | TGCTCTACAT  |
| 29821 | TGGCTGCGGT  | CGCTCACATC  | GAAGTAGATT | GCATCCCACC  | TTTCACAGTT | TACCTGCTTT  |
| 29881 | ACGGATTGTG  | CACCCTTATC  | CTCATCTGCA | GCCTCGTCAC  | TGTAGTCATC | GCCTTCATTC  |
| 29941 | AGTTCATTGA  | CTGGATTTGT  | GTGCGCATTG | CGTACCTTAG  | GCACCATCCG | CAATACAGAG  |
| 30001 | ACAGGACTAT  | AGCTGATCTT  | CTCAGAATTC | TTTAATTATG  | AAACGGATTG | TCACTTTTGT  |
| 30061 | TTTGCTGATT  | TTCTGCGCCC  | TACCTGTGCT | TTGCTCCCAA  | ACCTCAGCGC | CTCCCAAAAG  |
| 30121 | ACATATTTCC  | TGCAGATTCA  | CTCAAATATG | GAACATTCCC  | AGCTGCTACA | ACAAACAGAG  |
| 30181 | CGATTTGTCA  | GAAGCCTGGT  | TATACGCCAT | CATCTCTGTC  | ATGGTTTTTT | GCAGTACCAT  |
| 30241 | TTTTGCCCTA  | GCCATATAAC  | CATACCTTGA | CATTGGTTGG  | AATGCCATAG | ATGCCATGAA  |
| 30301 | CCACCCTACT  | TTCCCAGCGC  | CCAATGTCAT | ACCACTGCAA  | CAGGTTATTG | CCCCAATCAA  |
| 30361 | TCAGCCTCGC  | CCCCCTTCTC  | CCACCCCCAC | TGAGATTAGC  | TACTTTAATT | TGACAGGTGG  |
| 30421 | AGATGACTGA  | ATCTCTAGAT  | CTAGAATTGG | ATGGAATTAA  | CACCGAACAG | CGCCTACTAG  |
| 30481 | AAAGGCGCAA  | GGCGGCGTCC  | GAGCGAGAAC | GCCTAAAACA  | AGAAGTTGAA | GACATGGTTA  |
| 30541 | ACCTGCACCA  | GTGTAAAAGA  | GGTATCTTTT | GTGTGGTCAA  | GCAGGCCAAA | CTTACCTACG  |
| 30601 | AAAAAACCAC  | TACCGGCAAC  | CGCCTTAGCT | ACAAGCTACC  | CACCCAGCGC | CAAAAACCTGG |
| 30661 | TGCTTATGGT  | GGGAGAAAAA  | CCTATCACCG | TCACCCAGCA  | CTCGGCAGAA | ACAGAAGGCT  |
| 30721 | GCCTGCACTT  | CCCCATATCAG | GGTCCAGAGG | ACCTCTGCAC  | TCTTATTAAA | ACCATGTGTG  |
| 30781 | GCATTAGAGA  | TCTTATTCCA  | TTCAACTAAC | AATAAACACA  | CAATAAATTA | CTTACTTAAA  |
| 30841 | ATCAGTCAGC  | AAATCTTTGT  | CCAGCTTATT | CAGCATCACC  | TCCTTTCCCT | CCTCCCAACT  |
| 30901 | CTGGTATTTT  | AGCAGCCTTT  | TAGCTGCGAA | CTTTCTCCAA  | AGTCTAAATG | GGATGTCAAA  |

FIG. 17A-12

|       |            |             |              |             |             |             |
|-------|------------|-------------|--------------|-------------|-------------|-------------|
| 30961 | TTCCTCATGT | TCTTGTCCCT  | CCGCACCCAC   | TATCTTCATA  | TTGTTGCAGA  | TGAAACGCGC  |
| 31021 | CAGACCGTCT | GAAGACACCT  | TCAACCCTGT   | GTACCCATAT  | GACACGGAAA  | CCGGCCCTCC  |
| 31081 | AACTGTGCCT | TTCTTTACCC  | CTCCCTTTGT   | GTCGCCAAAT  | GGGTTCCAAG  | AAAGTCCCCC  |
| 31141 | CGGAGTGCTT | TCTTTGCGTC  | TTTCAGAACC   | TTTGGTTACC  | TCACACGGCA  | TGCTTGCGCT  |
| 31201 | AAAAATGGGC | AGCGGCCTGT  | CCCTGGATCA   | GGCAGGCAAC  | CTTACATCAA  | ATACAATCAC  |
| 31261 | TGTTTCTCAA | CCGCTAAAAA  | AAACAAAGTC   | CAATATAACT  | TTGGAAACAT  | CCGCGCCCCCT |
| 31321 | TACAGTCAGC | TCAGGCGCCC  | TAACCATGGC   | CACAACTTCG  | CCTTTGGTGG  | TCTCTGACAA  |
| 31381 | CACTCTTACC | ATGCAATCAC  | AAGCACCGCT   | AACCGTGCAA  | GACTCAAAAC  | TTAGCATTGC  |
| 31441 | TACCAAAGAG | CCACTTACAG  | TGTTAGATGG   | AAACTGGCC   | CTGCAGACAT  | CAGCCCCCCT  |
| 31501 | CTCTGCCACT | GATAACAACG  | CCCTCACTAT   | CACTGCCTCA  | CCTCCTCTTA  | CTACTGCAAA  |
| 31561 | TGGTAGTCTG | GCTGTTACCA  | TGGAAAACCC   | ACTTTACAAC  | AACAATGGAA  | AAC TTGGGCT |
| 31621 | CAAAATTGGC | GGTCCTTTGC  | AAGTGGCCAC   | CGACTCACAT  | GCACTAACAC  | TAGGTACTGG  |
| 31681 | TCAGGGGGTT | GCAGTTCATA  | ACAATTTGCT   | ACATACAAAA  | GTTACAGGCG  | CAATAGGGTT  |
| 31741 | TGATACATCT | GGCAACATGG  | AAC TTAAAAAC | TGGAGATGGC  | CTCTATGTGG  | ATAGCGCCGG  |
| 31801 | TCCTAACCAA | AAACTACATA  | TTAATCTAAA   | TACCACAAAA  | GGCCTTGCTT  | TTGACAACAC  |
| 31861 | CGCAATAACA | ATTAACGCTG  | GAAAAGGGTT   | GGAATTTGAA  | ACAGACTCCT  | CAAACGAAAA  |
| 31921 | TCCCATAAAA | ACAAAAATTG  | GATCAGGCAT   | ACAATATAAT  | ACCAATGGAG  | CTATGGTTGC  |
| 31981 | AAAACTTGGA | ACAGGCCTCA  | GTTTTGACAG   | CTCCGGAGCC  | ATAACAATGG  | GCAGCATAAA  |
| 32041 | CAATGACAGA | CTTACTCTTT  | GGACAACACC   | AGACCCATCC  | CCAAATTGCA  | GAATTGCTTC  |
| 32101 | AGATAAAGAC | TGCAAGCTAA  | CTCTGGCGCT   | AACAAAATGT  | GGCAGTCAAA  | TTTTTGGGCAC |
| 32161 | TGTTTCAGCT | TTGGCAGTAT  | CAGGTAATAT   | GGCCTCCATC  | AATGGAAC TC | TAAGCAGTGT  |
| 32221 | AAACTTGGTT | CTTAGATTTG  | ATGACAACGG   | AGTGCTTATG  | TCAAATTCAT  | CACTGGACAA  |
| 32281 | ACAGTATTGG | AACTTTAGAA  | ACGGGGACTC   | CACTAACGGT  | CAACCATACA  | CTTATGCTGT  |
| 32341 | TGGGTTTATG | CCAAACCTAA  | AAGCTTACCC   | AAAAACTCAA  | AGTAAACTG   | CAAAAAGTAA  |
| 32401 | TATTGTTAGC | CAGGTGTATC  | TTAATGGTGA   | CAAGTCTAAA  | CCATTGCATT  | TTACTATTAC  |
| 32461 | GCTAAATGGA | ACAGATGAAA  | CCAACCAAGT   | AAGCAAATAC  | TCAATATCAT  | TCAGTTGGTC  |
| 32521 | CTGGAACAGT | GGACAATACA  | CTAATGACAA   | ATTTGCCACC  | AATTCCTATA  | CCTTCTCCTA  |
| 32581 | CATTGCCCAG | GAATAAAGAA  | TCGTGAACCT   | GTTGCATGTT  | ATGTTTCAAC  | GTGTTTATTT  |
| 32641 | TTCAATTGCA | GAAAATTTCA  | AGTCATTTTT   | CATT CAGTAG | TATAGCCCCA  | CCACCACATA  |
| 32701 | GCTTATACTA | ATCACCGTAC  | CTTAATCAAA   | CTCACAGAAC  | CCTAGTATTC  | AACCTGCCAC  |
| 32761 | CTCCCTCCCA | ACACACAGAG  | TACACAGTCC   | TTTCTCCCCG  | GCTGGCCTTA  | AACAGCATCA  |
| 32821 | TATCATGGGT | AACAGACATA  | TTCTTAGGTG   | TTATATTCCA  | CACGGTCTCC  | TGTCGAGCCA  |
| 32881 | AACGCTCATC | AGTGATGTTA  | ATAAACTCCC   | CGGGCAGCTC  | GCTTAAGTTC  | ATGTCGCTGT  |
| 32941 | CCAGCTGCTG | AGCCACAGGC  | TGCTGTCCAA   | CTTGCGGTTG  | CTCAACGGGC  | GGCGAAGGAG  |
| 33001 | AAGTCCACGC | CTACATGGGG  | G TAGAGTCAT  | AATCGTG CAT | CAGGATAGGG  | CGGTGGTGCT  |
| 33061 | GCAGCAGCGC | GCGAATAAAC  | TGCTGCCGCC   | GCCGCTCCGT  | CCTGCAGGAA  | TACAACATGG  |
| 33121 | CAGTGGTCTC | CTCAGCGATG  | ATTGCGACCG   | CCCGCAGCAT  | AAGGCGCCTT  | GTCTCCGGG   |
| 33181 | CACAGCAGCG | CACCCTGATC  | TCACTTAAGT   | CAGCACAGTA  | ACTGCAGCAC  | AGTACCACAA  |
| 33241 | TATTGTTTAA | AATCCCACAG  | TGCAAGGCGC   | TGTATCCAAA  | GCTCATGGCG  | GGGACCACAG  |
| 33301 | AACCCACGTG | GCCATCATA C | CACAAGCGCA   | GGTAGATTAA  | GTGGCGACCC  | CTCATAAACA  |
| 33361 | CGCTGGACAT | AAACATTACC  | TCTTTTGGCA   | TGTTGTAATT  | CACCACCTCC  | CGGTACCATA  |
| 33421 | TAAACCTCTG | ATTAAACATG  | GCGCCATCCA   | CCACCATCCT  | AAACCAGCTG  | GCCAAAACCT  |
| 33481 | GCCCGCCGGC | TATGCACTGC  | AGGGAACCGG   | GACTGGAACA  | ATGACAGTGG  | AGAGCCCAGG  |

FIG. 17A-13

|       |            |             |            |             |             |             |
|-------|------------|-------------|------------|-------------|-------------|-------------|
| 33541 | ACTCGTAACC | ATGGATCATC  | ATGCTCGTCA | TGATATCAAT  | GTTGGCACAA  | CACAGGCACA  |
| 33601 | CGTGCATACA | CTTCCTCAGG  | ATTACAAGCT | CCTCCCGCGT  | CAGAACCATA  | TCCCAGGGAA  |
| 33661 | CAACCCATTC | CTGAATCAGC  | GTAAATCCCA | CACTGCAGGG  | AAGACCTCGC  | ACGTAACTCA  |
| 33721 | CGTTGTGCAT | TGTCAAAGTG  | TTACATTCCG | GCAGCAGCGG  | ATGATCCTCC  | AGTATGGTAG  |
| 33781 | CGCGTGTCTC | TGTCTCAAAA  | GGAGGTAGGC | GATCCCTACT  | GTACGGAGTG  | CGCCGAGACA  |
| 33841 | ACCGAGATCG | TGTTGGTCGT  | AGTGTTCATG | CAAATGGAAC  | GCCGGACGTA  | GTCATATTTT  |
| 33901 | CTGAAGCAAA | ACCAGGTGCG  | GGCGTGACAA | ACAGATCTGC  | GTCTCCGGTC  | TCGTCGCTTA  |
| 33961 | GCTCGCTCTG | TGTAGTAGTT  | GTAGTATATC | CACTCTCTCA  | AAGCATCCAG  | GCGCCCCCTG  |
| 34021 | GCTTCGGGTT | CTATGTAAAC  | TCCTTCATGC | GCCGCTGCCC  | TGATAACATC  | CACCACCGCA  |
| 34081 | GAATAAGCCA | CACCCAGCCA  | ACCTACACAT | TCGTTCTGCG  | AGTCACACAC  | GGGAGGAGCG  |
| 34141 | GGAAGAGCTG | GAAGAACCAT  | GTTTTTTTTT | TTTATTCCAA  | AAGATTATCC  | AAAACCTCAA  |
| 34201 | AATGAAGATC | TATTAAGTGA  | ACGCGCTCCC | CTCCGGTGCG  | GTGGTCAAAC  | TCTACAGCCA  |
| 34261 | AAGAACAGAT | AATGGCATTT  | GTAAGATGTT | GCACAATGGC  | TTCCAAAAGG  | CAAAC TGCCC |
| 34321 | TCACGTCCAA | GTGGACGTAA  | AGGCTAAACC | CTTCAGGGTG  | AATCTCCTCT  | ATAAACATTC  |
| 34381 | CAGCACCTTC | AACCATGCCC  | AAATAATTTT | CATCTCGCCA  | CCTTATCAAT  | ATGTCTCTAA  |
| 34441 | GCAAATCCCG | AATATTAAGT  | CCGGCCATTG | TAAAAATCTG  | CTCCAGAGCG  | CCCTCCACCT  |
| 34501 | TCAGCCTCAA | GCAGCGAATC  | ATGATTGCAA | AAATTCAGGT  | TCCTCACAGA  | CCTGTATAAG  |
| 34561 | ATTCAAAAGC | GGAACATTAA  | CAAAAATACC | GCGATCCCGT  | AGGTCCCTTC  | GCAGGGCCAG  |
| 34621 | CTGAACATAA | TCGTGCAGGT  | CTGCACGGAC | CAGCGCGGCC  | ACTTCCCCGC  | CAGGAACCAT  |
| 34681 | GACAAAAGAA | CCCACACTGA  | TTATGACACG | CATACTCGGA  | GCTATGCTAA  | CCAGCGTAGC  |
| 34741 | CCCgatGTAA | GCTTGTGCA   | TGGGCGGCGA | TATAAAATGC  | AAGGTACTGC  | TCAAAAAATC  |
| 34801 | AGGCAAAGCC | TCGCGCAAAA  | AAGCAAGCAC | ATCGTAGTCA  | TGCTCATGCA  | GATAAAGGCA  |
| 34861 | GGTAAGTTCC | GGAACCACCA  | CAGAAAAAGA | CACCATTTTT  | CTCTCAAACA  | TGTCTGCGGG  |
| 34921 | TTCTGCATA  | AACACAAAAT  | AAAATAACAA | AAAAAAAAAA  | ACATTTAAAC  | ATTAGAAGCC  |
| 34981 | TGTNTTACAA | CAGGAAAAAC  | AACCCTTATA | AGCATAAGAC  | GGACTACGGC  | CATGCCGGCG  |
| 35041 | TGACCGTAAA | AAAAC TGGT  | ACCGTGATTA | AAAAGCACCA  | CCGACAGTTC  | CTCGGTCATG  |
| 35101 | TCCGGAGTCA | TAATGTAAGA  | CTCGGTAAAC | ACATCAGGTT  | GGTTAACATC  | GGTCAGTGCT  |
| 35161 | AAAAAGCGAC | CGAAATAGCC  | CGGGGGAATA | CATACCCGCA  | GGCGTAGAGA  | CAACATTACA  |
| 35221 | GCCCCCATAG | GAGGTATAAC  | AAAATTAATA | GGAGAGAAAA  | ACACATAAAC  | ACCTGAAAAA  |
| 35281 | CCCTCCTGCC | TAGGC AAAAT | AGCACCTTCC | CGCTCCAGAA  | CAACATACAG  | CGCTTCCACA  |
| 35341 | GCGGCAGCCA | TAACAGTCAG  | CTTACCAGT  | AAAAAACCT   | ATTAAAAAAC  | ACCACTCGAC  |
| 35401 | ACGGCACCAG | CTCAATCAGT  | CACAGTGTA  | AAAGGGCCAA  | GTACAGAGCG  | AGTATATATA  |
| 35461 | GGACTAAAAA | ATGACGTAAC  | GGTTAAAGTC | CACAAAAACC  | ACCCAGAAAA  | CCGCACGCGA  |
| 35521 | ACCTACGCCC | AGAAACGAAA  | GCCAAAAAAC | CCACAAC TTC | CTCAAAATCTT | CAC TTCCGTT |
| 35581 | TTCCCACGAT | ACGTCAC TTC | CCATTTTAAA | AAAAAACTAC  | AATTCCCAAT  | ACATGCAAGT  |
| 35641 | TACTCCGCCC | TAAAACCTAC  | GTCACCCGCC | CCGTTCCAC   | GCCCCGCGCC  | ACGTCACAAA  |
| 35701 | CTCCACCCCC | TCATTATCAT  | ATTGGCTTCA | ATCCAAAATA  | AGGTATATTA  | TTGATGATG   |

FIG. 17A-14

| Animal    | Prime (Wk 0, 4, 26)           | Boost (Wk 56)                              | Pre               |                  | Prime <sup>b</sup> |     | Pre-Boost <sup>c</sup> |     | Post-Boost <sup>d</sup> |      |
|-----------|-------------------------------|--------------------------------------------|-------------------|------------------|--------------------|-----|------------------------|-----|-------------------------|------|
|           |                               |                                            | Mock <sup>a</sup> | Gag <sup>a</sup> | Mock               | Gag | Mock                   | Gag | Mock                    | Gag  |
| Monkey 1  | 10 <sup>9</sup> vp MRKAd5-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 18                | 16               | 1                  | 244 | 3                      | 74  | 3                       | 1235 |
| Monkey 2  | 10 <sup>7</sup> vp MRKAd5-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 10                | 9                | 4                  | 83  | 0                      | 18  | 0                       | 856  |
| Monkey 3  | 10 <sup>9</sup> vp MRKAd6-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 1                 | 1                | 0                  | 219 | 9                      | 69  | 0                       | 703  |
| Monkey 4  | 10 <sup>7</sup> vp MRKAd6-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 1                 | 1                | 3                  | 59  | 1                      | 20  | 0                       | 419  |
| Monkey 5  | none                          | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 3                 | 4                | ND <sup>e</sup>    | ND  | ND                     | ND  | 4                       | 558  |
| Monkey 6  | none                          | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 0                 | 3                | ND                 | ND  | ND                     | ND  | 1                       | 295  |
| Monkey 7  | none                          | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 1                 | 9                | ND                 | ND  | ND                     | ND  | 9                       | 103  |
| Monkey 8  | none                          | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 3                 | 3                | ND                 | ND  | ND                     | ND  | 1                       | 381  |
| Monkey 9  | none                          | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 0                 | 6                | ND                 | ND  | ND                     | ND  | 0                       | 369  |
| Monkey 10 | none                          | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 15                | 5                | ND                 | ND  | ND                     | ND  | 10                      | 211  |

FIG. 18

| Animal   | Prime (Wk 0, 4, 26)           | Boost (Wk 56)                              | Gag-Specific T cells (Wk 60) |      |
|----------|-------------------------------|--------------------------------------------|------------------------------|------|
|          |                               |                                            | %CD4                         | %CD8 |
| Monkey 1 | 10 <sup>9</sup> vp MRKAd5-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 0.06                         | 0.37 |
| Monkey 2 | 10 <sup>7</sup> vp MRKAd5-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 0.01                         | 0.56 |
| Monkey 3 | 10 <sup>9</sup> vp MRKAd6-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 0.07                         | 0.06 |
| Monkey 4 | 10 <sup>7</sup> vp MRKAd6-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 0.04                         | 0.20 |

FIG. 19



| Animal    | Prime (Wk 0, 4)                            | Boost (Wk 24)                 | Pre               |                  | Prime <sup>b</sup> |     | Pre-Boost <sup>c</sup> |     | Post-Boost <sup>d</sup> |      |
|-----------|--------------------------------------------|-------------------------------|-------------------|------------------|--------------------|-----|------------------------|-----|-------------------------|------|
|           |                                            |                               | Mock <sup>a</sup> | Gag <sup>a</sup> | Mock               | Gag | Mock                   | Gag | Mock                    | Gag  |
| Monkey 11 | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 10 <sup>7</sup> vp MRKAd5-gag | 3                 | 4                | 3                  | 150 | 4                      | 28  | 0                       | 188  |
| Monkey 12 | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 10 <sup>7</sup> vp MRKAd5-gag | 0                 | 3                | 1                  | 753 | 4                      | 554 | 0                       | 1029 |
| Monkey 13 | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 10 <sup>7</sup> vp MRKAd5-gag | 1                 | 9                | 4                  | 273 | 0                      | 370 | 0                       | 1520 |
| Monkey 14 | none                                       | 10 <sup>7</sup> vp MRKAd5-gag | 0                 | 0                | ND*                | ND  | ND                     | ND  | 4                       | 94   |
| Monkey 15 | none                                       | 10 <sup>7</sup> vp MRKAd5-gag | 0                 | 0                | ND                 | ND  | ND                     | ND  | 1                       | 168  |
| Monkey 16 | none                                       | 10 <sup>7</sup> vp MRKAd5-gag | 8                 | 3                | ND                 | ND  | ND                     | ND  | 8                       | 149  |

FIG. 20